DRAFT

CITY OF MILPITAS
MILPITAS, CALIFORNIA

ENGINEERING DIVISION

SPECIFICATIONS

FOR

NORTH MAIN STREET DEVELOPMENT PROJECT
BLACKSMITH SHOP AND RESIDENCE DEMOLITION
116 & 86 N. MAIN STREET
MILPITAS, CA

PROJECT NO. 8154 & 8169

Prepared by: SCS ENGINEERS

Dated: September 19, 2005

Recommended for Bidding: _____
Steve Erickson
Principal Engineer

Approved for Bidding: _____
Greg Armandariz
City Engineer

Date: _____

Copy No. _____

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SECTION A - INFORMATION FOR BIDDERS AND BID FORMS

DRAFT

NOTICE INVITING BIDS

Notice is hereby given that the Design and Construction Engineer of the City of Milpitas, Milpitas, California, shall receive sealed bids at the Public Services Counter, Milpitas City Hall, 455 E. Calaveras Boulevard, until **2:00 p.m. on September __, 2005**, and that bids will be opened in public at or about that hour at City Hall for: **North Main Street Development Project, Blacksmith Shop and Residence Demolition, 116 and 86 N. Main Street Sites,** as more particularly set forth in the drawings and specifications on file in the office of the City Engineer. The estimated cost is between $190,000 and $220,000.

The work involves but is not necessarily limited to demolition of existing facilities, foundation, asphalt and improvements at both the Blacksmith Shop and Residence at 116 & 86 N. Main Street, Milpitas, CA. The intent is to provide a cleared and fenced in lot with bare dirt surface. Interested bidders shall attend a pre-bid site visit. Pre-bid site visit is currently scheduled for 10:00 a.m. on September __, 2005. Interested bidders shall meet at the project site at 86 N. Main Street, Milpitas, California. Please call Lenard Long at (925) 240-5152 between 8:00 a.m. and 5:00 p.m. if you have any technical questions regarding the project.

A prime contractor bidding on this project shall possess a minimum Class A or Class C-21 license from the Contractors State License Board. The work also involves handling of hazardous substances, and requires that the contractor doing any work involving asbestos or hazardous material removal be certified by the Contractors State License Board for Hazardous Substances Removal or Asbestos Abatement or both. Any bidder or contractor not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the contractor's State License Board in accordance with Section 20103.5 of the Public Contract Code.

Notice also is hereby given that in accordance with Section 1773.2 of the Labor Code of the State of California, copies of the general prevailing rate of per diem wages in the locality in which the public work is to be performed for each craft, classification, as determined by the Director of the Department of Industrial Relations are on file in the Office of the City Engineer. It shall be mandatory upon the Contractor to whom the contract is awarded, and upon all subcontractors under him or her, to pay not less than the highest of the applicable rates set forth in either the federal or municipal schedules of prevailing wage rates.

Employer payments other than those itemized therein, as defined in Section 1773.1 of the Labor Code, are to be paid in accordance with the terms of the collective bargaining agreement applicable to the type of classification of the worker employed on the project, including overtime, Sunday and holiday pay.

Pursuant to the provisions of Public Contract Code Section 22300, and at the request and expense of the Contractor, securities equivalent to the amount withheld by City to ensure performance under a contract shall be deposited with City and with a State or Federally chartered bank as escrow agent who shall pay such monies to the Contractor upon satisfactory completion of the contract. Eligible securities shall include those listed in Government Code Section 16430 or bank or savings and loan certificates for deposit. The Contractor shall be the beneficial owner of said security and shall receive any interest thereon.

Proposals will be reviewed by the City Engineer and scheduled to be presented to the City Council at the meeting of October , 2005 at which time the Council may accept or reject bids.

A Contract Document fee (non-refundable) of fifty dollars ($50.00) is required of each bidder who desires to secure a set of drawings, specifications and proposal forms, which may be secured at the Public Services Counter, City Hall, 455 E. Calaveras Blvd., Milpitas, California. Contract Documents can also be obtained by mail for an additional fifteen dollars ($15.00) per set. Please make check payable to City of Milpitas and mail to: City of Milpitas 455 E. Calaveras Blvd., Milpitas, CA, 95035, contact (408) 586-3300 for more details.

Date: _____

Greg Armendariz, City Engineer

PROPOSAL

Milpitas, California_____

_____

To the City of Milpitas:

"NONCOLLUSION AFFIDAVIT TO BE EXECUTED
BY BIDDER AND SUBMITTED WITH BID

State of California)
) §§
County of _____)

_____, being first duly sworn, deposes and says that he or she is _____ of _____ _____ the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid."

IF A SOLE OWNER OR SOLE CONTRACTOR, SIGN HERE:

1) Name under which business is conducted _____

2) Signature _____

3) Place of business _____
(Street and Number)

City and State _____

4) Telephone No. _____ Zip _____

IF A PARTNERSHIP, SIGN HERE:

1) Name under which business is conducted _____

2) Signature of each member of partnership:
(Indicate character of each partner - general or special)

_____

_____

3) Place of business _____
(Street and Number)

City and State _____

4) Telephone No. _____ Zip _____

PROPOSAL (Continued)

_____

IF A CORPORATION, SIGN HERE:

1) Name under which business is conducted_____

2) Signature, with official title of officer authorized to sign for the Corporation

_____

(Impress Corporate Seal Here)

3) Incorporated under the laws of the State of_____

City and State_____

4) Place of business_____

(Street and Number)

City and State_____

4) Telephone No._____ Zip_____

_____

MY/OUR STATE CONTRACTOR'S LICENSE, NO._____,

CLASSIFICATION NO._____, EXPIRES_____, 20___

THIS PROPOSAL MUST BE NOTARIZED BELOW

SUBSCRIBED AND SWORN TO BEFORE ME, THIS_ DAY OF_____, 20_____

_____

(NOTARIAL SEAL)

Notary Public in and for the

County of_____

State of_____

Notice:

This proposal must include the completion of the following:

"INFORMATION REGARDING SUBCONTRACTORS"

"WORKER'S COMPENSATION and APPRENTICE STANDARDS"

PROPOSAL (Continued)

ADDENDA

FROM: _____
Bidding Contractor

PHONE: _____

TO: The City of Milpitas, herein called Owner:

Pursuant to and in compliance with the Notice of Bidders and the Contract Documents relating to.

The undersigned bidder acknowledges receipt of the following addenda to the Contract Documents:

Addendum No.: _____, dated _____

Addendum No.: _____, dated _____

Addendum No.: _____, dated _____

Addendum No.: _____, dated _____

Addendum No.: _____, dated _____

Addendum No.: _____, dated _____

Failure to acknowledge receipt of all addenda shall cause the bid to be considered non-responsive to the Contract Documents. Acknowledged receipt of each addendum must be clearly established and included with the offer.

_____ _____
Signature and Title Date

I/We agree to perform the above entitled work in accordance with Plans and Specifications of the City of Milpitas for the prices listed below:

PROPOSAL (Continued)

BID SCHEDULE

City of Milpitas

BASE BID: Basis of Determining Low Bid

A. Provide all labor, equipment, tools, material and incidentals to execute the **North Main Street Development Project**, **Blacksmith Shop and Residence Demolition Project, 116 and 86 N. Main Street Sites** complete and in place, as set forth in the plans, specifications and contract documents for the lump sum bid price of:

Lump Sum _____

_____

_____ Dollars $_____
(Price in Words) (Price in Numbers)

TOTAL BASE BID $_____

NOTE #1 Bid Bond required in the amount of 10% of the Total Bid.

NOTE #2 In case of any inconsistency or conflict between words and figures submitted by bidder, the words shall govern. Unit prices will prevail regardless of extensions submitted by Bidder.

NOTE #3 It is understood that the quantities of work to be done are approximate only, being given as a basis for the comparison of bids, and the City of Milpitas does not expressly or by implication agree that the actual quantities will correspond therewith, but reserves the right to increase or decrease which may be deemed necessary or expedient by the Engineer.

NOTE #4 All schedules (bid items) must be bid. Bid alternate items will not be awarded independent of the Base Bid. Add alternate bid items, if accepted, shall be included in the contract and the amount for each one selected shall be added to the Base Bid. The City shall have sole discretion in determining the selection of bid alternate items. The contract will be awarded on the basis of the lowest bid price on the base contract without consideration of the prices on the bid alternate items.

PROPOSAL (Continued)

SCHEDULE OF VALUES

City of Milpitas

A cost breakdown (schedule of values) for the lump sum Base Bid is mandatory. The breakdown shall be used for analyzing the Contractor's proposal and bid schedule, and for application for payment. Include all work. The sum of items 1 through 12 must equal the Contractor's lump sum Base Bid amount, line item A in the Bid Schedule.

a) Blacksmith Shop 028-24-020 and 028-24-026

Item No. 1 – Mobilization and Temporary Facilities (Section E-03, E-06)

Lump Sum Price: _____ Dollars $_____

Item No. 2 – Traffic Control and Maintenance of Access (Section E-02, E-04)

Lump Sum Price: _____ Dollars $_____

Item No. 3 – Storm Water Pollution Prevention and **Dust Control** (Section E-05, E-07, E-8)

Lump Sum Price: _____ Dollars $_____

Item No. 4 – Site Preparation including clearing and grubbing (Section E-09)

Lump Sum Price: _____ Dollars $_____

Item No. 5 – Miscellaneous Utility Modifications (Section E-12 disconnect & cap existing piping, etc.)

Lump Sum Price: _____ Dollars $_____

Item No .6 – Lead, removal, handling and disposal of lead-containing paint and lead-containing materials (Section E-14)

Lump Sum Price: _____ Dollars $_____

Item No. 7 – Salvage, Demolition of Building and Appurtenant Structures (Section E-10)

Lump Sum Price: _____ Dollars $_____

PROPOSAL (Continued)

SCHEDULE OF VALUES
(continued)

City of Milpitas

Item No. 8 – Disposal of Miscellaneous Materials including Hazardous Items (Section E-15, etc.) and Miscellaneous Debris

Lump Sum Price: _____ Dollars $_____

Item No. 9 – Earthwork including filling & grading (Section E-11)

Lump Sum Price: _____ Dollars $_____

Item No. 10 – Miscellaneous site work (Section E-11 & E-12, fencing modifications, etc)

Lump Sum Price: _____ Dollars $_____

Item No. 11 – Project Closeout including Site Restoration and Documents

Lump Sum Price: _____ Dollars $_____

b) Residential Structure

Item No. 12 - Mobilization and Temporary Facilities (Section E-03, E-06)

Lump Sum Price: _____ Dollars $_____

Item No. 13 - Traffic Control and Maintenance of Access (Section E-02, E-04)

Lump Sum Price: _____ Dollars $_____

Item No. 14 – Storm Water Pollution Prevention and **Dust Control** (Section E-05, E-07, E-8)

Lump Sum Price: _____ Dollars $_____

Item No. 15 - Site Preparation including clearing and grubbing (Section E-09)

Lump Sum Price: _____ Dollars $_____

Item No. 16 - Miscellaneous Utility Modifications (Section E-12 disconnect & cap existing piping, etc.)

Lump Sum Price: _____ Dollars $_____

Item No. 17 - Asbestos , removal, handling and disposal of asbestos-containing materials (Section E-13)

Lump Sum Price: _____ Dollars $_____

Item No. 18 - Demolition of Building and Appurtenant Structures (Section E-10)

Lump Sum Price: _____ Dollars $_____

Item No. 19 - Disposal of Miscellaneous Materials including Hazardous Items (Section E-15, etc.) and Miscellaneous Debris

Lump Sum Price: _____ Dollars $_____

Item No. 20 - Earthwork including filling & grading (Section E-11)

Lump Sum Price: _____ Dollars $_____

Item No. 21 - Miscellaneous site work (Section E-11 & E-12, fencing modifications, etc)

Lump Sum Price: _____ Dollars $_____

Item No. 22 - Project Closeout including Site Restoration and Documents

Lump Sum Price: _____ Dollars $_____

TOTAL: (must equal Base Bid, bid schedule line item A) $_____

INFORMATION REGARDING SUBCONTRACTORS

AS REQUIRED BY THE SPECIFICATIONS

In compliance with the provisions of Section 4100 & 4109 of the Public Contract Code of the State of California and any amendments thereto, the undersigned Bidder shall list below the name and business address of each subcontractor who will perform work under this Bid in excess of one-half of one percent of the Bidder's Total Bid Price, and shall also list the portion of the work which will be done by such subcontractor. After the opening of bids, no changes or substitutions will be allowed except as otherwise provided by law. The listing of more than one subcontractor for each item of work to be performed with the words "and/or" will not be permitted. Failure to comply with this requirement may render the Bid non-responsive and may cause its rejection.

Work to be Performed	Percent of Total Contract	Subcontractor Name & Address
1. _____	_____	_____ _____ _____
2._____	_____	_____ _____ _____
3._____	_____	_____ _____ _____
4._____	_____	_____ _____ _____
5._____	_____	_____ _____ _____
6._____	_____	_____ _____ _____
7._____	_____	_____ _____ _____

PROPOSAL (Continued)

WORKER'S COMPENSATION INSURANCE

"I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self insurance in accordance with the provisions of that Code and I will comply with such provisions before commencing performance of the work of this contract, as evidenced by my signature below."

APPRENTICESHIP STANDARDS

Information relative to apprenticeship standards and administration of the apprenticeship program may be obtained from the Director of Industrial Relations, San Francisco, California, or from the Division of Apprenticeship Standards and its branch office.

"I am aware of the provisions of Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the contractor or any subcontractor under him or her. I comply with the requirements of said sections in the employment of apprentices, as evidenced by my signature below."

Signed by _____

Official Title _____

DRAFT

CONTRACT

At Milpitas, California, the ____day of _____, 2005, the CITY OF MILPITAS, a municipal corporation in the County of Santa Clara, State of California, hereinafter called "City," and _____ _____, and _____ hereinafter called "Contractor," hereby agrees:

1. That into this contract, as though fully set out herein, are incorporated the Notice Inviting Bids, Instructions to Bidders, Proposal, General Conditions, Special Provisions, Specifications, Drawings, Addenda, if any, the Plans and Specifications and Drawings heretofore filed with the City Engineer and such other writing as are incorporated in the foregoing, all as set forth in that document entitled Contract Documents for **North Main Street Development Project, Blacksmith Shop and Residence Demolition, 116 and 86 N. Main Street Sites** dated August 31, 2005 and prepared by SCS Engineers.

Particular recognition is hereby given to those portions of the contract as above expanded relating to wage rates, 8-hour limits and employment of alien labor, as more specifically set forth in the Government Code of the State of California.

2. That the Contractor shall perform and be bound by all of the terms and conditions of this contract as above expanded and in strict conformity therewith shall perform and complete in a good and workmanlike manner in accordance with maps, plans and specifications on file in the office of the City Engineer of the City of Milpitas.

3. That for such performances the City shall pay to the Contractor the prices set forth in the accepted bid proposal schedule shown in the Proposal, and the time set forth in of the Contract Documents. The Contractor shall receive total compensation in an amount not to exceed $____ dollars ($_____) upon satisfactory completion of the work as specified in the Contract Documents. The Contractor shall accept such payment in full satisfaction of all claims incident to such performances.

4. Contractor acknowledges that in conformance with the Contract Documents, any changes or extra work must be authorized in writing by the City prior to the Contractor performing said work. Contractor further acknowledges that if it is solely responsible for obtaining written authorization from the City and that it shall not be compensated for any additional work performed without said written authorization. Oral authorization shall not be sufficient to bind the City absent specific written authorization.

5. That in no case shall any department, board, or officer in the City be liable for any portion of the contract price nor shall the City or any department, board of officer thereof be liable for any of the work performed by said Contractor under this contract.

6. That in accordance with the provisions of Section 1296 of the Code of Civil Procedures of the State of California, in any arbitration whether agreed to or required by law to resolve a dispute relating to this contract, the arbitrator's award shall be supported by law and substantial evidence.

IN WITNESS WHEREOF, the parties have executed this contract the day and year first above written.

Approved as to Form:

By:_____ By:_____
City Attorney City Manager

Approved as to Sufficiency:

By:_____ By:_____
City Engineer Contractor

DRAFT

Bond No._____

FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that _____ as Principal, and _____, a corporation authorized to do business in the State of California and organized and existing under and by virtue of the laws of the State of _____ as Surety, are held and firmly bound unto the City of Milpitas, a municipal corporation of the County of Santa Clara, the State of California, in the sum of _____ _____ Dollars ($_____), for the faithful performance of a certain annexed contract, **North Main Street Development Project, Blacksmith Shop and Residence Demolition, 116 and 86 N. Main Street Sites**, to be paid to the City of Milpitas for the payment of which well and truly to be made, the said Principal and the said Surety, hereby bind themselves and all and singularly, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

Signed by us and dated this _____ day of _____, 20____.

WHEREAS, the said Principal has entered into the annexed contract with the City of Milpitas to perform and complete, in strict conformity herewith and in a good and workmanlike manner in accordance with maps, plans and specifications on file in the office of the City Engineer of the City of Milpitas.

NOW, THEREFORE, the conditions of the above and foregoing obligations are such that:

If the said Principal shall faithfully perform the said contract, then the above obligation with respect to the faithful performance of said contract shall be void; otherwise to remain in full force and effect.

And that said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

In case suit is brought upon this bond by the City of Milpitas, a reasonable attorney's fee, to be fixed by the Court, shall be paid by Principal and Surety.

IN WITNESS WHEREOF, the said Principal and Surety have executed this instrument the day and year first herein above written.

Approved as to Form:

By:_____ City Attorney

By:_____ Principal (Contractor)

Approved:

By:_____ City Manager

By:_____ Surety

DRAFT

Bond No._____

LABOR AND MATERIALS BOND

KNOW ALL MEN BY THESE PRESENTS, that _____ _____ as Principal, and _____ a corporation authorized to do business in the State of California and organized and existing under and by virtue of the laws of the State of _____ as Surety, are held and firmly bound unto the City of Milpitas, a municipal corporation of the County of Santa Clara, the State of California, in the sum of _____ _____ Dollars ($_____ _____) for the benefit of laborers and material hereinafter designated, to be paid to the City of Milpitas for the payment of which well and truly to be made, and said Principal and the said Surety, hereby bind themselves and all and singularly, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

Signed by us and dated this ____ day of _____, 20____.

WHEREAS, the said Principal has entered into the annexed contract with the City of Milpitas to perform and complete, in strict conformity therewith and in a good and workmanlike manner **North Main Street Development Project, Blacksmith Shop and Residence Demolition, 116 and 86 N. Main Street Sites**, in accordance with maps, plans and specifications on file in the office of the City Engineer of the City of Milpitas.

NOW, THEREFORE, the conditions of the above and foregoing obligations are such that:

If said principal or his or her subcontractors, their heirs, executors, administrators, successors and assigns shall fail to pay for any materials, provisions, provender or other supplies or teams used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind or for amounts due under the Unemployment Insurance Act with respect to such work or labor, then said Surety will pay the same in or to an amount not exceeding the amount herein above specified to be for the benefit of laborers and material and also will pay, in case suit is brought upon this bond, such reasonable attorney's fee as shall be fixed by the Court, awarded and taxed as provided by law.

This bond, to the extent of the obligation herewith with respect to laborers and material, shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Division 3, Part 4, Title 15 of the Civil Code of the State of California, so as to give a right of action to them or their assigns in any suit brought upon this bond. And that said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same, shall in any way affect its obligations on the bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or the specifications. In case suit is brought upon this bond by the City of Milpitas, a reasonable attorney's fee, to be fixed by the Court, shall be paid by principal and surety.

IN WITNESS WHEREOF, the said Principal and Surety have executed this instrument the day and year first herein above written.

Approved as to Form:

By:_____ City Attorney

By:_____ Principal (Contractor)

Approved:

By:_____ City Manager

By:_____ Surety

DRAFT

PAYMENT BOND CERTIFICATE REQUIREMENTS:

In conformance with the State of California Civil Code Section 995.660, the insurer shall submit with 10 working days of executing this LABOR AND MATERIAL'S BOND
certificate:

1. An original or certified copy of the insurer's certificate of authority issued by the
Insurance Commissioner.

2. A certificate from the County Clerk that the insurer’s certificate of authority has not been revoked or suspended, or if so, that is has been renewed, and copies of the insurer’s most recent annual and quarterly statement filed with the Department of Insurance pursuant to Section 900 st seq. of the Insurance Code.

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CITY OF MILPITAS CERTIFICATE OF INSURANCE
General and Automobile Liability

The undersigned insurance company hereby certifies to the City of Milpitas, California that it has issued a policy of insurance bearing Policy No. _____ to _____ in connection with a certain as work of improvement generally described as **North Main Street Development Project, Blacksmith Shop and Residence Demolition, 116 and 86 N. Main Street Sites**, being a certain general and automobile liability policy which names the City of Milpitas, its officers and employees as additional insured, and which insures said City, officers and employees against liability of financial loss resulting from injuries occurring to persons or property in or about or in connection with said work of improvement, including, but not limited to, coverage for all work performed by, for or on behalf _____.

Said policy of insurance provides coverage in the following minimum amounts and for the following periods:

	COVERAGE	POLICY NO.	POLICY PERIOD	MINIMUM LIMITS OF LIABILITY
1)	Bodily Injury			$1,000,000 each person $1,000,000 each occurrence
2)	Property Damage			$1,000,000 each person $1,000,000 each occurrence

This policy provides: (1) primary coverage for additional insured parties; if said additional insured have other insurance against loss covered by this policy, the other insurance shall be excess insurance only; (2) That said additional insured parties are not precluded from claim under this policy against other insured parties; and (3) Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City Clerk.

_____ Address of Signatory:
Insurance Company

_____ _____
Authorized Signature (Sign)

_____ _____
Authorized Signature (Type)

VERIFICATION

I declare under the penalty of perjury that I am authorized to sign this Certificate on behalf of the above-named insurer. Executed at _____, California, on the _____ day of _____, 20____. *

_____
Authorized Signatory (Sign)

_____
(Type Name)

SUBSCRIBED AND SWORN TO BEFORE ME, a Notary Public, this _____ day of _____, 20____.

_____ _____
(Sign) (Type Name)

* If this certificate is executed outside of California, it must be sworn to before a Notary Public.

DRAFT

FORM APPROVED:_____, 20___, by_____

DRAFT

CITY OF MILPITAS

CONTRACTOR'S CERTIFICATE RELATING TO WORKER'S COMPENSATION INSURANCE

I, THE UNDERSIGNED, HEREBY CERTIFY that at all times during the performance of any work under contract or agreement with the City of Milpitas (check one of the following):

_____ I will have in full force and effect Worker's Compensation Insurance pursuant to the attached Certificate of Worker's Compensation Insurance issued by an admitted insurer. Said certificate shall state that there is in existence a valid policy for Worker's Compensation Insurance in a form approved by the California Insurance Commissioner. The certificate shall show the expiration date of the policy, that the full deposit premium on the policy has been paid and that the insurer will give City at least ten (10) days advance notice of the cancellation of the policy (an exact copy or duplicate of the Certificate of Worker's Compensation Insurance certified by the Director of Industrial Relations or the insurer may be attached).

_____ I have in full force and effect and have attached hereto a Certificate of Consent to Self-insure issued by the Director of Industrial Relations (an exact copy of duplicate thereof certified by the Director may be attached).

I declare under penalty of perjury that the foregoing is true and correct and executed on this _____ day of _____, 20__ at Milpitas, California.

By:_____

_____
Official Title

On behalf of: _____
Contractor

NOTE: YOUR CERTIFICATE OF WORKER'S COMPENSATION INSURANCE MUST BE ATTACHED AND MUST MEET THE REQUIREMENTS SET FORTH ABOVE.

PLEASE NOTE THAT IF YOU HAVE ANYONE WORKING FOR OR WITH YOU, YOU MAY BE REQUIRED TO HAVE WORKER'S COMPENSATION INSURANCE. FOR FURTHER INFORMATION, CONTACT THE OFFICE OF THE DIRECTOR OF INDUSTRIAL RELATIONS, 888 NORTH FIRST STREET, SAN JOSE, CALIFORNIA, TELEPHONE (408) 277-1265.

DRAFT

CERTIFICATE OF WORKER'S COMPENSATION INSURANCE

FOR THE CITY OF MILPITAS

The undersigned insurance company hereby certifies to the City of Milpitas, California, that it is an admitted Worker's Compensation Insurer and that it has issued a policy of Worker's Compensation Insurance bearing policy number _____ to _____. Said policy is a valid policy of Worker's Compensation Insurance issued in a form approved by the California Insurance Commissioner and is now in full force and effect. The full deposit on said policy has been paid. The expiration date of said policy is the _____ day of _____, 20__. The undersigned insurer will give said City of Milpitas at least ten (10) days advance notice of the cancellation of said policy.

Dated:_____

_____
INSURANCE COMPANY

Address:_____

_____

_____
AUTHORIZED REPRESENTATIVE (Signature)

_____
AUTHORIZED REPRESENTATIVE (Type Name)

I declare under penalty of perjury that the foregoing is true and correct.

Executed at Milpitas, California, on the _ day of _____, 20_____.

_____
AUTHORIZED REPRESENTATIVE (Signature)

_____
AUTHORIZED REPRESENTATIVE (Type Name)

SECTION B - INSTRUCTION TO BIDDERS

B-01 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK

The bidder is required to examine carefully the site of the work, the proposal plans and specifications. The bidder shall satisfy himself or herself as to the character, quality and quantities of work to be performed, materials to be furnished, and as to the requirements of this contract. The plans for the work show conditions as they are believed to exist, but it is not to be inferred that all of the conditions shown thereon are actually existent nor shall the City or any of its officers be liable for any loss sustained by the Contractor as a result of any variance between conditions as shown on the plans and the actual conditions revealed during the progress of the work or otherwise. The submission of proposal shall be prima facie evidence that the bidder has made such an examination.

The plans for this work include portions of the construction plans for the structures to be demolished. Complete sets of record drawings for these structures along with record drawing for other existing site improvements are available for review at the City offices. The plan sets include: Plans titled **North Main Street Development Project, Blacksmith Shop and Residence Demolition, 116 and 86 N. Main Street Sites** dated September 6, 2005 and these specifications.

Any information shown on the plans as to the soil or material borings or tests of existing materials is for the purpose of design. The information is not guaranteed, and no claims for extra work or damages will be considered if it is found during construction that the actual soil or material conditions vary from those indicated.

B-02 INTERPRETATION OF DRAWINGS AND DOCUMENTS

If any bidder should find discrepancies in, or omissions from the drawings, specifications or other proposed contract documents, or if the bidder should be in doubt as to the true meaning of any part thereof, he or she shall at once make a written request to the Engineer for correction, clarification, or interpretation of the point or points in question. The person submitting such request shall be responsible for its prompt delivery. Such requests must be received no later than seven working days prior to the date scheduled for bid opening.

In the event that the Engineer receives such a request, and it should be found that certain essential information is not clearly and fully set forth, or if the Engineer discovers errors, omissions or points requiring clarification in the drawings or documents, a written addendum will be mailed to each person to whom a set of contract documents (on the plan holder list) has been delivered. The City will not be responsible for any instructions, explanations or interpretations of the documents presented to bidders in any manner other than written addendum.

B-03 ADDENDA

The effect of all addenda to the contract documents shall be considered in the bid, and said addenda shall be made a part of the contract documents and shall be returned with them. Before submitting his or her bid, each bidder shall inform himself or herself as to whether or not any addenda have been issued, and failure to cover in his or her bid any such addenda issued, may render his or her bid in complete and result in its rejection.

B-04 BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm or corporation shall be allowed to make, file or to be interested in more than one bid for the same work unless alternate bids are called for. A person, firm or corporation who has submitted sub-proposal to a bidder, or who has quoted prices on materials to a bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other bidders or from submitting a bid in his or her own behalf.

B-05 PROPOSALS

Bids to receive consideration shall be made in accordance with the following instructions:

a) Bids shall be made only upon the forms attached to and forming a part of the specifications; all bid items shall be properly filled out; numbers shall be stated in both words and in figures and the signature of all persons signing shall be in longhand. Where there is conflict in the words and figures, the words shall govern.

b) All prices and notations must be in ink or typewritten. No erasures will be permitted. Mistakes may be crossed out and correction typed or written in with ink adjacent thereto, and must be initialed in ink by the person or persons signing the bid.

c) Bids shall not contain any recapitulation of the work to be done. Alternative proposals will not be considered unless called for. No oral, telegraphic, or telephonic proposals or modifications will be considered.

d) The City may require any bidder to furnish a statement of his or her experience, financial responsibility, technical ability, equipment and references, properly and fully filled out.

e) Each bidder shall list his or her proposed subcontractors on the form accompanying the proposal, in accordance with the provisions of the specifications.

f) Each bidder must accompany his or her bid with either a cashier's check upon some responsible bank, a check upon such bank properly certified, an approved corporate surety bond or letter of credit payable to the City of Milpitas for a sum not less than ten (10) per cent of the aggregate sum of bid, which check or bond, and moneys represented thereby shall be held by the City as guarantee that the bidder, if awarded the contract, will in good faith enter into such contract and furnish the required bonds. The bidder agrees that in case of his or her refusal or failure to execute said contract and give said bonds within the time required by these documents, such check, bond, or credit, and the money represented thereby shall remain the property of the City, and if the bidder shall fail to execute said contract, said surety will pay to the City the damages which the City may suffer by reason of such failure, not exceeding the sum of ten (10) percent of the amount of the bid. A bid received and not accompanied by such cashier's check, certified check, approved bond, or letter of credit may be rejected.

g) Bids shall be delivered to the City office specified in the "Notice Inviting Bids" on or before the day and hour set for the opening of bids. Bids shall be enclosed in a sealed envelope and shall bear the title of the work and name of the bidder.

h) Bids may be withdrawn by the bidder prior to but not after the time fixed for opening of bids.

B-06 OPENING OF BIDS

Bids will be opened and read at the time and place set in the "Notice Inviting Bids" in the Milpitas City Hall, Milpitas, California. Bidders or their representatives and other interested persons, are invited to be present at the opening of bids.

B-07 BID PROTEST

Should any bidder question or protest the award of the contract to the apparent low bidder, such question or protest must be furnished in writing to the City Engineer no later than five working days following the date of the bid opening. Such submittal must fully explain the basis of the objection supported by all relevant information facts and details. Questions or protests not furnished in writing as prescribed will not be accepted. The City Engineer's response will be provided no later than three working days prior to the date scheduled for contract award. No administrative appeal to the City Engineer's response will be accepted.

B-08 AWARD OR REJECTION OF BIDS

The contract may be awarded to the lowest responsible bidder whose proposal complies with these and all other contract documents.

The City reserves the right to review bids for a period of time not to exceed forty-two (42) working days after sealed bids have been opened, before formally awarding contract or rejecting bids. The City also reserves the right to reject any or all bids, and to waive any minor informality or immaterial technical deviation in bids received and any requirement of these specifications as to bidding procedure.

B-09 THE CONTRACT

After contract award, a Notice of Award will be provided to the successful bidder. The successful bidder shall execute a written contract with the City of Milpitas and furnish good and approved bonds as specified by the City within ten (10) Working days after receipt of Notice of Award, unless the extension of time is granted to the bidder in writing. The contract shall be made in the form adopted by the City and provided in these Contract Documents. If the bidder to whom the award is made fails to enter into the contract as herein provided, award may be annulled, and an award may be made to the next lowest responsible bidder and such bidder shall fulfill every stipulation embraced herein as if the bidder were the party to whom the first award was made. A corporation in which an award is made shall furnish evidence of its corporate existence and evidence that the officer signing the contract and bonds for the corporation is duly authorized to do so.

B-10 BONDS

The successful bidder, simultaneously with the execution of the contract, shall furnish a labor and material's bond and faithful performance bond, each in an amount equal to one hundred (100) per cent of the contract price, as hereinafter more particularly specified. Surety companies, to be acceptable to the City, must be authorized to do business in the State of California.

PAYMENT BOND CERTIFICATE REQUIREMENTS:

In conformance with the State of California Civil Code Section 995.660, the Contractor shall submit within10 working days of executing the LABOR AND MATERIAL'S BOND certificate:

1. An original or certified copy of the insurer's certificate of authority issued by the Insurance Commissioner.

2. A certificate from the County Clerk that the insurer's certificate of authority has not been revoked or suspended, or if so, that is has been renewed, and copies of the insurer's most recent annual and quarterly statement filed with the Department of Insurance pursuant to Section 900 st seq. of the Insurance Code.

SECTION C – GENERAL CONDITIONS

C-01 DEFINITIONS OF WORDS AND TERMS

Where used in the specifications, the following words and terms shall have the meanings indicated.

a. Acceptance — Formal action by the City Council in accepting that the entire contract has been completed in all respects in accordance with the Contract Documents and any modifications previously approved.

b. City — City of Milpitas, a municipal corporation of the State of California.

c. Council — The City Council of the City of Milpitas.

d. Consulting Engineer/Architect — One of several consulting firms or their designated representatives having a contractual relationship with the City to perform certain duties.

e. Contract Documents — Contract Documents means everything contained in the bound volume and any and all other written instruments and drawings of every kind and nature attached to or made a part hereof, by reference or by operation of law; such as, but not limited to Notice Inviting Bids, Instructions to Bidders, Proposal, Bonds, Specifications, General Conditions, Special Conditions, Technical Specifications (or Special Provisions), Drawings, Submittals and the Agreement which is prepared for execution by the City and the Contractor, and which is itself a part of the Contract Documents as above defined, and which by this reference and by reference made in such form of agreement includes all other "Contract Documents" the same as though they were set out in full therein, also, any and all supplemental written agreements, orders, or addenda amending or extending the work contemplated and which may be required to complete the work in a substantial and acceptable manner.

f. Contractor — Person, firm, or corporation with which whom the contract is made with the City.

g. Completion — When all the contract obligations have been fully met by the Contractor.

h. Contract Time — Number of working days as stated in Section D-01, for the completion of the various parts of the Work (defined as Milestones) and the whole of the Work.

i. Not used

j. Liquidated Damages — The amount prescribed in the specifications, to be paid to the Engineer or to be deducted from any payments due or to become due the Contractor for each working day's delay in completing any of the Milestones, and in addition, for each working day's delay in completing the whole of the Work as it is more fully described in the Special Provisions.

k. Milestone — An event specified in the Contract Documents relating to an intermediate completion date or time prior to Completion of all the work.

l. Notice to Proceed — A written notice given by the Engineer to the Contractor fixing the date on which the contract time will start. Notice to Proceed also refers to the starting date indicated on the Notice.

m. Engineer — The City Engineer or authorized representative, acting on behalf of the City.

n. Project Construction Schedule — A detailed schedule of work using the Critical Path Method (CPM). The schedule shall indicate the contemplated commencement and completion dates for each major item of work as specified in Section C-29 Project Construction Schedule.

o. Engineer's Representative — The person designated by the Engineer to act as its agent on specified matters relating to this contract. The Engineer's Representative is an employee or consultant of the City.

p. Punchlist — A list generated by the Engineer or the Engineer's Representative of any work to be completed or corrected by the Contractor before the contract work will be recommended for acceptance by the City Council. This Punchlist is developed after the Contractor has notified the Engineer in writing that all work is complete.

q. As-Built Documents — Contract drawings, Contractor shop drawings, and equipment manuals revised by the Contractor to reflect actual installation where it deviates from the original document, or to show features constructed or found that do not show on the original document.

r. Standard Specifications — The City of Milpitas Standard Specifications, consisting of:

1. The City of Milpitas edition of Standard Drawings revised February 2003.

2. Specified sections of the Caltrans Standard Specifications and amendments, dated July 2002 and November 18, 2002, respectively.

s. State — State of California Department of Transportation.

t. Submittal — Any document or material required to be submitted to the Engineer for the Engineer's review or information.

u. Special Provisions — Modifications or additions to the Supplemental General Provisions.

v. Work — Everything required to be furnished or performed pursuant to the Contract Documents as described herein.

w. The word "Reuse" means the act of salvage and deconstruction of demolition materials generated from the project and applying salvaged and deconstructed material into the end product.

x. The words "Recycle" and "Recycling" mean the act of sorting, or keeping separate, and hauling to permitted facilities that accept, process and market recycled materials.

y. The word "Disposal" means the act of hauling to permitted landfills that accept materials for burial.

z. The words "Post-Consumer Recycled Content" mean materials that are processed and remanufactured after original consumer use.

C-02 INTENT OF THE CONTRACT

It is the intent of this contract to obtain a finished, workmanlike job, complete and in place, with all equipment properly installed and operating.

In the specifications, plans, schedules and details, information is conveyed by means of brief mention or

notation which, regardless of brevity, shall be binding exactly as if presented in complete sentences employing mandatory language. Work not listed in the specifications or drawings, but clearly implied as necessary to complete the job, shall be included as though fully specified and drawn.

Titles and headings to sections and paragraphs in these specifications are introduced merely for convenience and shall not be taken as a correct or complete segregation of the several units of materials and labor. No responsibility, either direct or implied, will be assumed by the City, for omissions or duplications by the Contractor or its subcontractors due to real or alleged error in arrangement of matter in the Contract Documents.

C-03 STANDARD SPECIFICATIONS AND CODES

The work described herein shall be performed in accordance with the City of Milpitas Standard Specifications which are hereby incorporated by reference, and which hereafter will be referred to as the Standard Specifications, insofar as the same may apply and as modified or supplemented by these Specifications.

The work shall as a minimum, also be performed in accordance with the various regulatory codes applicable to the work being performed, or as specified, if more stringent requirements are called for in the Technical Specifications.

C-04 INVESTIGATION OF CONDITIONS

a. The Contractor shall visit the site, examine all documents, and become familiar with the nature and character of the project site and its general and particular location; the physical and contractual conditions and requirements; and the limitations and various other aspects relative to this project prior to bidding.

b. The Engineer will not consider any claims whatsoever on account of Contractor's failure to fully investigate or determine requirements in advance of commencing the work.

c. The location of existing utilities and other facilities shown on the drawings have been obtained from the best available information, but it is not guaranteed to be accurate and/or complete. It is the Contractor's responsibility to verify and locate all utility crossings, by potholing if necessary, before beginning construction.

C-05 CONTRACTOR'S BONDS

The Contractor shall furnish a Labor and Materials Bond in an amount not less than one hundred (100) per cent of estimated contract price, to be paid to the City of Milpitas conditioned upon the payments by said Contractor for all materials, services, supplies, and transportation furnished in the performance of the work contracted to be done by the terms of said contract, and for any work or labor of any kind done thereon.

The Contractor shall also furnish a Faithful Performance Bond in an amount not less than one hundred (100) per cent of the estimated contract price, to be paid to the City, conditioned upon the faithful performance by the Contractor of all covenants and stipulations in the contract.

In the event that Contractor fails to perform any obligation on its part to be performed hereunder, Contractor agrees to pay all costs and expenses incurred by City in securing performance of such obligation and if suit be brought by City to enforce this agreement, Contractor agrees to pay costs of suit and reasonable attorney's fees to be fixed by the Court.

If, during the continuance of the contract, any of the sureties, in the opinion of the City Council evidenced by resolution, are or become irresponsible, the City Council may require additional sufficient sureties, which the

Contractor shall furnish to the satisfaction of said Council, within ten (10) days after notice, and in default thereof, the contract may be suspended by the City Council evidenced by resolution, and the materials may be purchased or the work completed as elsewhere provided in these specifications.

PAYMENT BOND CERTIFICATE REQUIRMENTS:

In conformance with the State of California Civil Code Section 995.660, the Contractor shall submit within 10 working days of executing the LABOR AND MATERIAL'S BOND certificate:

1. An original or certified copy of the insurer's certificate of authority issued by the Insurance Commissioner.

2. A certificate from the County Clerk that the insurer's certificate of authority has not been revoked or suspended, or if so, that is has been renewed, and copies of the insurer's most recent annual and quarterly statement filed with the Department of Insurance pursuant to Section 900 st seq. of the Insurance Code.

C-06 CONTRACTOR'S FINANCIAL OBLIGATIONS

The Contractor shall make prompt payments for all labor, materials, and services furnished to or for him in accordance with the Contract requirements.

C-07 INSURANCE

No work shall be done under this Contract unless there is in effect insurance required under this section, (and as may be set forth in the Special Conditions), and such insurance has been approved by the City nor shall the Contractor allow any subcontractor to commence work on his subcontract until all insurance required of the subcontractor has been so obtained and approved. The Contractor shall maintain or cause to be maintained adequate workers' compensation insurance as required under the laws of the State of California, for all labor employed by him or by any subcontractor under him who may come within the protection of such worker's compensation laws of the State of California and shall provide or cause to be provided employer's general liability insurance for the benefit of his employees and the employees of any subcontractor under him not protected by such compensation laws.

The Contractor shall take out and shall furnish satisfactory proof, by certificate or otherwise as may be required, that it has taken out public liability and property damage insurance with insurance carriers satisfactory to the City, and in such form as shall be satisfactory to the City to protect said Contractor and said City as an additional insured against loss from liability imposed by law from damages on account of bodily injury, including death resulting therefrom, suffered or alleged to have been suffered by any person or persons other than employees, resulting directly or indirectly from the performance or execution of this contract or any subcontract thereunder, and also to protect said Contractor and said City as an additional insured against loss from liability imposed by law for damage to any property caused directly or indirectly by the performance or execution of this contract or any subcontract thereunder, which insurance shall also cover accidents arising out of the use and operation of automobiles and trucks. Said policy shall include, but not be limited to coverage for the omissions and supervisory acts of the City, its officers and employees.

Said policy shall also provide that the coverage afforded thereby to City, its officers, engineer and consultants, and employees, is primary coverage to the full limit of liability stated in the Declaration, and if the City, its officers or employees have other insurance against loss covered by said policy, said other insurance shall be excess insurance only, and that City, its officers and employees are not precluded from claims thereunder against other insured parties.

All said public liability and property damage insurance shall be maintained by the Contractor in full force and effect during the entire period by performance under this contract, (unless otherwise set forth in the Special Conditions), the amounts of coverage of said insurance shall not be less than the following:

General & Automobile Liability ----------	$1,000,000 per person $1,000,000 for each occurrence
Property Damage ----------	$1,000,000 for each occurrence $1,000,000 aggregate

Said policies shall have a non-cancellation clause providing that thirty (30) days written notice shall be given the City prior to such cancellation. Where the work includes a structure or structures subject to loss or damage by fire, the Contractor shall maintain or cause to be maintained fire insurance sufficient to protect against such loss or damage in full until the work is accepted by the City. Nothing herein contained shall be construed as limiting in any way the extent to which the Contractor may be held responsible for the payment of damages to persons or property resulting from his or her operations or operations of any subcontractor under him or her.

Proof of all such insurance shall be given by filing certificates of such insurance with the City Engineer prior to execution of the contract by the City.

Indemnification:

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless City, its officers, engineer and consultants, and employees, directors, partners, agents and other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, costs, loss, or damage:

1. is attributed to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom: and

2. is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of any individual or entity indemnified hereunder or whether liable is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

In any and all claims against City or Engineer or any of their respective consultants, agents, office, directors, partners, or employees by any employee (or the survivor or personal representatives of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under this section shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under worker's compensation acts, disability benefit acts, or other employee benefit acts.

C-08 LAWS TO BE OBSERVED

The Contractor shall fully observe and comply with all State and Federal laws including those of CAL-OSHA and municipal ordinances and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having jurisdiction or authority over the same. The Contractor shall also cause all agents and employees engaged on the project to observe and comply with all such laws, ordinances, regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority over the work; and shall protect and indemnify the City of Milpitas and all officers, employees, and agents thereof connected with the work

against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or its employees, or subcontractors. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications or contract for the work in relation to any such law, ordinance, regulation, order or decree, whether by the Contractor or its employees, or subcontractors, the Contractor shall forthwith report the same to the Engineer in writing.

C-09 SPECIAL PERMITS AND LICENSES

The California Environmental Quality Act (CEQA) (Public Resources Code, Sections 21000 and following), may be applicable to permits, licenses and other authorizations which the Contractor must obtain from local agencies in connection with performing the work of the contract. The Contractor shall comply with the provision of those statutes in obtaining such permits, licenses, and other authorizations, and they shall be obtained in sufficient time to prevent delays in the work. In the event that the Engineer has obtained permits, licenses, or other authorization applicable to the work in conformance with the requirements of CEQA, the Contractor shall comply with the provisions of these permits, licenses, and other authorizations.

C-10 APPRENTICESHIP STANDARDS

Attention is directed to the provisions in Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him.

Section 1777.5, as amended, requires the Contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate will also fix the ratio of apprentices to journeymen that will be used in the performance of the contract. The ratio of apprentices to journeymen in such cases shall not be less than one to five except:

A. When unemployment in the area of coverage by the joint apprenticeship committee has exceeded an average of 15 percent in the 90 days prior to the request for certificate, or

B. When the number of apprentices in training in the area exceeds a ratio of one to five, or

C. When the trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis statewide or locally, or

D. When assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman.

The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if he employs registered apprentices or journeyman in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.

The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, the office of the Administrator of Apprenticeship, San Francisco, California or from the Division of Apprenticeship Standards and its branch offices.

C-11 NON-DISCRIMINATION

Contractor shall abide by all federal and state laws preventing discrimination in the employment of persons upon public works and shall ensure by appropriate contract provisions that all subcontractors are similarly obligated to comply with all such laws. These laws include, but not are limited to the following. California Labor Code Section 1735 which provides that "*No discrimination shall be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, or sex of such persons, except as provided in Section 12940 of the Government Code, and every contractor for public works violating this section is subject to all the penalties imposed for a violation of this chapter."* Likewise, Contractor and all of its subcontractors shall abide by the provisions of California Labor Code Section 1777.6 prohibiting discrimination in the acceptance of otherwise qualified apprentices; and California Labor Code Section 3095 which declares unlawful the discrimination in any recruitment or apprenticeship program on stated grounds. City shall be entitled to retain and withhold all penalties as authorized pursuant to California Labor Code, Division 2, Part 7, Chapter 1, commencing with Section 1720 and following, in accordance with the provisions of that Chapter, and the regulations established by the Director of Industrial Relations pursuant to the statutory authority of such chapter.

C-12 PATENTS, PROPRIETARY OR TRADE NAMES

The Contractor shall hold and save the City, its officers, agents, servants and employees harmless from liability of any nature or kind or any claim therefore, including costs and expenses for or on account of any patented invention, article, or appliance included in the material or supplies furnished under this contract, and should the Contractor, his agents, servants, employees, or any of them be enjoined from furnishing or using any invention, article, material or appliance supplied or required to be supplied or used under this contract, the Contractor shall promptly substitute other articles, materials, or appliances in lieu thereof, of equal efficiency, quality, finish, suitability and market value and satisfactory in all respects to the Engineer. Or in the event that the Engineer elects, in lieu of such substitution, to have supplied and to retain and use any such invention, article, material or appliances as may by this contract be required to be supplied, in that event the Contractor shall pay such royalties and secure such valid licenses as may be requisite and necessary to enable the City, its officers, agents, servants, and employees, or any of them, to use such invention, article, material or appliance without being disturbed in any way interfered with by any preceding in law or equity on thereof. Should the Contractor neglect or refuse promptly to make the substitution hereinbefore required or to pay such royalties and secure such licenses as may be necessary and requisite for the purpose aforesaid, then in that event the Engineer shall have the right to make such substitution, or the City may pay such royalties and secure such licenses and charge the cost thereof against any money due the Contractor from the City, or recover the amount hereof from him and his sureties, notwithstanding final payment under this contract may have been made. The provisions of this paragraph don't apply to articles which the Contractor is required to manufacture or furnish in accordance with detail drawings furnished by the City included in this Contract. They shall apply, however, where such drawings and the specifications cover only the type of device without restriction as to details.

Attention is directed to the provisions of Section 4380 of the Government Code which is a part of this project. Where only one brand of trade name is known to the City, the City has, as permitted by Section 4380, listed only one brand or trade name in these specifications, but is willing to accept a fully equal product. If the Contractor wishes to substitute an item identified in the plans or specifications under a brand, trade name, manufacturer's catalog number, data requesting such substitution shall be submitted to the Engineer not later than 10 working days after award of the contract. Such data shall include full information for review by the Engineer supporting the request for substitution of each item on a fully equal basis.

C-13 ASSIGNMENT OF CONTRACT

No assignment by the Contractor of the contract shall be made for any purpose without the consent of the City and the sureties; provided, however, that the Contractor may make an assignment of any sums of money due or to become due under this contract as collateral for financial purposes in connection with the contract. Any such assignment shall contain a clause in the instrument of assignment to the effect that it is agreed that the funds to be paid the assignee under the assignment are subject to all liens or claims of any kind whatsoever authorized by law, whether prior or subsequent, for services rendered or materials supplied for the performance of the work called for in the contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.

C-14 CERTIFIED PAYROLL

The Contractor and its subcontractors shall submit their certified payrolls as requested by the Engineer. The wages paid by the Contractor and its subcontractors shall be the current applicable prevailing wage rates and in accordance with Section C-51 Wage Rates. Contractor shall submit copies of certified payrolls with the first invoice or request for progress payments. Progress payments may be partially withheld (up to 25%) until the Contractor has satisfied all the requirements of this Section. On large projects, over $500,000, monthly certified payrolls shall be submitted for approval.

C-15 SUBCONTRACTORS

No subcontractor will be recognized as such by the City, and all persons engaged by the Contractor in work of furnishing labor, materials, and equipment or any one or more of them, will be considered as employees of the Contractor, except regarding insurance as provided elsewhere herein.

The Contractor shall list in the sheet provided herein, the name and place of business of each subcontractor who will perform work or labor, or render service to the Contractor in or about the construction of the work or improvement, in an amount in excess of one-half of one (1/2 of 1) percent of the Contractor's total bid, and shall also list the portion of the work which will be done by each subcontractor. Only one subcontractor shall be listed for each portion of work to be let.

If the Contractor fails to list a subcontractor for any portion of the work to be performed under the contract, in excess of one-half of one (1/2 of 1) percent of the Contractor's bid, then the Contractor shall perform that portion of the work itself.

The Contractor shall not substitute any person or subcontractor in place of the subcontractor designated in the original bid; nor shall he permit any such subcontract to be assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the bid; nor shall he sublet or subcontract any portion of the work in excess of one-half of one (1/2 of 1) percent of the Contractor's total bid which was not listed in the original bid, except as provided hereafter.

The City may consent to the substitution of another subcontractor when the subcontractor named in the bid, after having a reasonable opportunity to do so, fails or refuses to execute a written contract, based upon these contract documents and the terms of the named subcontractor's bid is presented to him by the Contractor or fails to perform the work, goes out of business – or loses contracting license.

The City may permit subletting or subcontracting of any portion of the work excess of one-half of one (1/2 of 1) percent to the Contractor's total bid when no subcontractor was designated in the original bid, in cases of public emergency or necessity, after a finding reduced to writing by the Engineer, setting forth facts constituting the emergency or necessity and evidenced by resolution of the Council.

In general, it is the intention that not more than fifty (50) percent of work shall be subcontracted. The listing of more than fifty (50) percent may cause a rejection of the bid, if in the opinion of the City, such extensive contracting is undesirable. The subcontract shall contain a reference to the agreement between the City and the principal Contractor and the terms of that agreement and all parts thereof shall be made a part of such subcontract insofar as applicable to the work covered thereby. All work or material furnished by a subcontractor shall be guaranteed by the Contractor and the City will hold the Contractor responsible therefore.

C-16 DOCUMENT PRECEDENCE

The plans together with the specifications attached hereto, will govern the work to be done. Anything mentioned in these specifications and not shown on the plans and detail drawings and anything shown on the plans and detailed drawings and not mentioned in these specifications shall be of like effect as though shown or mentioned in both. In case of any conflict, the following shall be the order of precedence.

1. Contract Change Orders
2. Addenda, if any
3. Technical Specifications
4. Special Conditions
5. General Conditions
6. City Standard Specifications
7. Plans
8. City Standard Drawings
9. Specified sections and details of the Caltrans Standard Specifications and Standard Plans, dated July 2002, and amendments dated November 18, 2002.

Copies of the City standard drawings and specifications may be obtained upon request at the office of the City Engineer. Where Standard Specifications and Standard Plans are referred to, it shall mean State of California, Business and Transportation Agency, Department of Transportation, Standard Specifications, July 2002, and Standard Plans, July 2002, and amendments dated November 18, 2002, except as noted.

The Engineer may furnish from time to time such detail drawings, plans, profiles and information as he may consider necessary for the Contractor's guidance, unless otherwise provided in the proposal, agreement or detail specifications. In cases where the contract work or any portion thereof is to be performed in accordance with drawings, specifications, lists of data submitted by the Contractor and approved by the Engineer, such approved drawings, etc., shall become portions of the Plans and Specifications as regards the specific matters to which such approval applies. The Contractor shall be solely responsible for the correctness of the measurements and other essential information submitted by him and for the correlation of the various portions and features of the work which are or may be affected by such measurements and information.

Any change required by the Engineer in the drawings, etc., submitted for approval by the Contractor, shall be considered as necessary in order to comply with the requirements of the plans and specifications, and shall not be the basis of any claim for extra compensation over and above the bid price for the work, except where changes involving the extra work are expressly authorized and ordered in accordance with the section of these specifications relating to changes and extra work.

A copy of the plans and specifications shall be kept upon the work at all times during its progress, and access thereto shall at all times be accorded the Engineer. At the end of the construction, the Contractor shall provide the Engineer with a complete red-lined copy of “Record” drawing showing all the changes from the original plan.

The Contractor shall, for the price bid, furnish all supervision, labor, materials, transportation and equipment necessary to execute the work in every respect in a thorough, workmanlike manner in accordance with the plans, profiles and specifications, and to the satisfaction of the Engineer. All work shall, during its progress and until its completion, conform to the lines, elevations and grades shown on said plans and profiles.

C-17 INTERPRETATION OF PLANS AND SPECIFICATIONS

Should questions or doubt as to the true meaning of any part of the plans and specifications arise during the fulfillment of the contract, the Contractor shall make a written request to the Engineer for correction, clarification or interpretation of the point or points in question. The Engineer, upon receipt or such request, shall give to the Contractor in writing any corrections clarifying or interpreting the point or points in questions, which shall be final and binding and become a part of the contract.

C-18 QUANTITY UNITS, MEASUREMENTS, AND PAYMENTS

Before ordering any materials or doing any work, the Contractor shall verify all measurements, dimensions, elevations and quantities. No extra charge or compensation over and above payment for the actual quantities of the various items of work at the respective bid prices therefore will be allowed on account of difference between actual measurements, dimensions, elevations and quantities, and those indicated on the drawings, and in the specifications, and difference therein shall be submitted to the Engineer for consideration before proceeding with the work.

The quantity units, such as tons, square feet, cubic yards each, and other units listed in the proposal, shall be the basis for payment. All work to be paid for at the contract price per unit of measurement will be measured by the United States standard measures. All distances and elevations shown on the plans, profiles or other drawings are in feet and decimal fractions thereof.

The Contractor shall be paid for the actual quantities installed as measured in the field by the Engineer of all work performed, complete, in place, as accepted by the Engineer and free of defects or poor workmanship, as specified in the bid schedule, schedule of values and these Specifications. The Contractor shall submit all weight tickets to the Engineer for materials used on the job site including asphalt, concrete, and all other materials measured by ton, tonne, meter, cubic yard, cubic feet etc. in good order. The Engineer shall review the weight tickets, and shall compare against the measured actual quantities installed in the field. In comparing the weight tickets with actual measured quantities, the Contractor shall be paid for these items based on the lesser value of this comparison. Work required under these specifications and where no method of measurement and payment is explicitly specified, the Contractor shall include all related costs thereof, in the various items of work paid for and no further compensation shall be allowed therefore.

C-19 SURVEY

The Contractor shall provide all survey required by an independent land surveyor licensed in the State of California.

C-20 SUBSTITUTIONS

a. General — Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered "requests for substitutions." The following are not considered substitutions:

   Revisions to Contract Documents requested by the Engineer.

   Specified options of products and construction methods included in Contract Documents.

   Compliance with governing regulations and orders issued by governing authorities.

b. Substitution — Requests for substitution will be considered if received within the number of days stated in the Special Provisions after the date indicated in the Notice to Proceed or 35 days from the date of Award, whichever is the later. Requests received after this period may be accepted or rejected at the discretion of the Engineer.

Each request for substitution shall be prepared and presented to the Engineer in accordance with the procedures for submittals, except that the following additional information shall be provided.

1. An explanation of the advantages to the City for accepting the substitution.

2. A comparison of significant qualities of the proposed substitution with those specified.

3. A list of changes or modifications needed to other parts of the work and the construction performed by the Engineer and separate Contractors, that will be necessary to accommodate the proposed substitution.

4. A statement indicating the substitution's effect on the Construction Schedule compared to the Construction Schedule without acceptance of the substitution. Indicate the effect of the proposed substitution on overall contract time.

5. Cost information, including a proposal of the net change, if any, in the Contract Sum.

6. Certification that the substitution is equal to or better in every respect to that required by Contract Documents, and that it will perform adequately in application indicated. Include Contractor's waiver of rights to additional payment or time extensions, that may be necessary because of the substitution's failure to perform adequately.

c. Substitution Conditions — The Contractor's substitution request will be considered by the Engineer when the following conditions are satisfied, as determined by the Engineer, otherwise, requests will be returned without action except to record non-compliance with these requirements.

Time extension revisions to Contract Documents are not required.

Proposed changes are in keeping with the general intent of Contract Documents.

The request is timely, fully documented and properly submitted.

The specified product or method of construction cannot be provided within the Contract Time. The request may not be considered if the product or method cannot be provided as a result of failure of the Contractor to pursue the work promptly or coordinate activities promptly, unless the product proposed is at least equal or better.

A substantial advantage is offered the Engineer, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Engineer may be required to bear. Additional responsibilities for the Engineer may include additional compensation to the Consulting Engineer/ Architect for redesign and evaluation services, increased cost of other construction by the Engineer or separate contractors, and similar considerations.

The specified product or method of construction can receive necessary approval by a regulatory agency, and the requested substitution can be approved.

The specified product or method of construction can be provided in a manner that is compatible with other materials, and the Contractor certifies that the substitution will be compatible.

The specified product or method of construction can be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.

The specified product or method of construction does provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution will provide the required warranty.

d. Unacceptable Substitution Conditions — The Contractor's submittal and Engineer's acceptance of Shop Drawings, Product Data or Samples that do not comply with the Contract Documents does not constitute a valid request for substitution, nor does it constitute acceptance of a substitution.

e. Engineer's Action — The Engineer will notify the Contractor of acceptance or rejection of the proposed substitution within the time limits stated in the Special Provisions. If a decision on use of a substitution cannot be made within these time limits, the product specified shall be used.

f. Time Extension — No extension of time will be allowed through failure of the Contractor to either transmit requests for substitution sufficiently in advance of the work, or on account of processing time outside the time limits noted above.

C-21 SPECIFIED "OR APPROVED EQUAL" ITEMS

Whenever catalog numbers and specific brands of trade names followed by the designation "or approved equal" are used in conjunction with a designated material, product, item, or service mentioned in these specifications, they are used to establish the standards of quality and utility required. "Or approved equal" proposals will be subject to acceptance by the Engineer.

C-22 SUBMITTALS

a. The Contractor shall provide a minimum of 5 copies of each submittal in accordance with the General Conditions and Technical Provisions.

b. Within 10 working days after Notice to Proceed, the Contractor shall provide a detailed list of all individual submittals required to be submitted under the contract. The list shall reference the Specification section/article/paragraph numbers that require the submittal. The list shall also state the date the Contractor plans to transmit the submittal to the Engineer for review.

c. Submittals shall be prepared in such form that data can be identified with the applicable Specification section/article/paragraph. The data shall clearly demonstrate compliance with the Contract Plans and Specifications and shall relate to the specific material, equipment to be furnished, or process to be followed. Where manufacturer's standard drawings are employed, they shall be clearly marked to show what portions of the data are applicable to this project.

d. Submittal coordination is the responsibility of the Contractor. The responsibility shall not be delegated in whole or in part to subcontractors or suppliers.

e. All submittals (shop drawings and supporting data, catalogs, schedules, etc.), shall be submitted as the instruments of the Contractor, who shall be responsible for their accuracy and completeness. These submittals may be prepared by the Contractor, subcontractors, or suppliers, but the Contractor shall ascertain that submittals meet all of the requirements of the Contract Documents, while conforming to

structural, space, and access conditions at the point of installation. The Contractor shall check all submittals before submitting them to the Engineer.

f. Each submittal shall relate only to one item or groups of items logically related, and shall be accompanied by a transmittal with the following information:

1 Project Name and City Project Number
2 Submittal number
3 Submittal date
4 Specification reference that requires the submittal
5 Name and address of Contractor
6 Name of subcontractor/supplier/manufacturer (as applicable)
7 For Shop Drawings, a 4" x 5" space shall be provided beside the title block on each drawing sheet for the Engineer's use.
8 Certification from the Contractor on the transmittal stating that the submittal:

a. has been reviewed by the Contractor
b. has been found to be in conformance with the specification requirements
c. is not in conflict with other submittals
d. has deviations or substitutions clearly identified, and that they are documented in accordance with these specifications.

g. Allow 10 working days, unless otherwise specified in Section D-03 for the Engineer's review of submittals and resubmittals. Note that there are some different requirements for Construction Schedule submittals. No extension of time will be allowed through failure of the Contractor to either transmit submittals sufficiently in advance of the work or on account of resubmittals.

h. Incomplete submittals will not be accepted and will be returned to the Contractor.

i. If the Engineer's review of a submittal requires cross reference to, or coordination with, another submittal not yet transmitted to the Engineer for review, it will be returned to the Contractor for resubmittal at a more appropriate time.

j. If the Engineer's review of a submittal reveals that supplemental information is necessary to complete the review, it will be returned to the Contractor for augmentation and resubmittal.

k. After review by the Engineer of each of the Contractor's submittals, the material will be returned to the Contractor marked with actions defined as follows: (Actual wording may be different, but will convey similar meaning.)

1. NO EXCEPTIONS TAKEN – Accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. Does not constitute acceptance or deletion of specified or required items not shown in a partial submittal.

2. MAKE CORRECTIONS NOTED – The same as 1, except that minor corrections as noted by the Engineer shall be made by the Contractor. No resubmittal is required.

3. AMEND AND RESUBMIT – Rejected because of major inconsistencies or errors which shall be resolved or corrected by the Contractor prior to subsequent review by the Engineer.

4. REJECTED – Submitted material does not conform to plans and specifications in major respects. This material is not expected to be resubmitted.

5. ACCEPTED FOR RECORD – Submittals not reviewed by the Engineer, but accepted for record purposes, or submittals reviewed with the intent that the comments be utilized by the Contractor in the preparation of subsequently required submittals (e.g., comments on the Preliminary Construction Schedule shall be used in preparing the Baseline Construction Schedule).

l. Submittals shall be reviewed as a complete package and will not be returned marked with more than one of the actions noted above. Any submittal that requires further review shall be resubmitted in its entirety, using the same submittal number and a revision number, until the full submittal has been favorably reviewed or Accepted for Record.

m. Favorable review by the Engineer will not constitute acceptance by the Engineer of any responsibility for the accuracy, coordination and completeness of submittals, shop drawings or the items of equipment represented on the drawings. Accuracy, coordination, and completeness of submittals shall be the sole responsibility of the Contractor, including responsibility to back-check comments, corrections, and modifications from the Engineer's review before construction or fabrication commences. Similarly, the Engineer accepts no responsibility for the correctness, compatibility or coordination of construction methods, schedules or materials.

n. The Contractor shall not proceed with the procurement, fabrication, delivery, construction or installation of items requiring a submittal without favorable review of the submittal by the Engineer. Items k(1) and k(2) above (no resubmittal required) are considered "favorable review." Items k(3) and k(4) above (correction and resubmittal required) are considered "unfavorable review." Favorable review shall not relieve the Contractor of its obligation to meet safety requirements and all other requirements of Law, nor constitute a Contract Change Order.

o. It is expected that the Contractor shall provide complete and acceptable submittals to the Engineer the first time. The Engineer may recover the cost of processing and reviewing resubmittals in case the number of first resubmittals exceeds 10% of the total number of submittals required. The Engineer may recover all the costs of processing and reviewing second resubmittals.

p. After submittals are reviewed, the Engineer will return two copies to the Contractor. For shop drawings, only the reproducible will be returned. It shall be the Contractor's responsibility to copy and/or conform reviewed Shop Drawings in sufficient numbers for its files, subcontractors and vendors.

C-23 REQUEST FOR INFORMATION (RFI)

If the Contractor should find discrepancies in, or omissions from the drawings, specifications or other proposed contract documents, or if he should be in doubt as to the true meaning of any part thereof, he shall at once make a written request on a Request for Information (RFI) form to the Engineer for correction clarification, or interpretation of the point or points in question.

C-24 REQUEST FOR QUOTATION (RFQ)

A Request for Quotation (RFQ) process will be used to obtain quotations for any additional work requested by the City. Upon receipt of a Request for Quotation (RFQ) from the City, the Contractor will submit a response as quickly as possible as time is of the essence, with appropriate backup documentation and a labor, material and equipment breakdown.

C-25 CHANGE ORDERS (CCO's)

Upon City's acceptance of a quotation to perform additional work on the contract, a Change Order to the contract will be issued. Upon receipt of the Change Order, the Contractor is required to sign and return the document to the City for signature by the signing authority. Once the Change Order is fully executed, a copy will be returned to the Contractor for his use. Change Orders may not be included in the Progress Payment until they are fully executed.

C-26 PROJECT COORDINATION

The Contractor shall coordinate activities to assure efficient and orderly procurement, fabrication, construction, installation and testing/start-up of all parts of the work. This includes coordinating operations covered under different Specification Sections that are dependent on each other for proper installation and operation.

Where installation of one component depends on installation of other components before or after its own installation, activities shall be scheduled in the most appropriate sequence to obtain the most satisfactory installation.

All costs of coordinating work with utility companies, other contractors and City crews, shall be considered to be included in the various bid prices and no additional compensation will be allowed.

The Contractor shall coordinate scheduling and timing of administrative procedures with other activities to avoid conflicts and to ensure orderly progress. Such activities include, but shall not be limited to:

Preparation of Construction Schedules.
Preparation and processing of submittals.
Attending Progress meetings.
Coordinating Project closeout activities.

C-27 PROJECT MEETINGS

a. Preconstruction Conference – A meeting will be scheduled by the Engineer at the beginning of the work to review the project with the Contractor. The meeting shall be attended by responsible, representatives of the Contractor, including the designated Contractor's Representative and Job Superintendent. The Preconstruction Conference may be postponed if the Preliminary Construction Schedule is not submitted by the Contractor in accordance with the "Construction Schedule" requirements.

b. Progress Meetings – Regular meetings to review the work will be held as directed by the Engineer. The meetings shall be attended by responsible representatives of the Contractor, including the designated Contractor's Representative and Job Superintendent.

c. Special Meetings – Special meetings may be held in addition to regular progress meetings as directed by the Engineer. The meetings shall be attended by responsible representatives of the Contractor, including the designated Contractor's Representative and Job Superintendent.

Full compensation for attendance of all Project meetings shall be considered as included in the various items of work paid for, and no further compensation shall be allowed therefore.

C-28 MONUMENTS PRESERVATION

The Contractor is responsible for the preservation and or perpetuation of all existing monuments and stakes within the Contractor's area of work. The Contractor shall not disturb any monuments or stakes without permission of the City Engineer, and he shall bear the expense of resetting any monuments or stakes which may be disturbed with or without permission. The Contractor shall provide a minimum of 15 Working days notice to the City Engineer prior to disturbance or removal of existing monuments or stakes. The Contractor shall utilize the services of a California Licensed Land Surveyor to reset all disturbed or removed monuments and stakes or

provide witness monuments, and file the required documentation with the County Surveyor pursuant to the Business and Professions Code Section 8771.

C-29 CONSTRUCTION SCHEDULE

The Contractor shall submit a Construction Schedule to the Engineer for approval at least ten (10) working days prior to beginning any work within the construction site. All work shall be completed within 40 working days of the city notice to proceed. This detailed schedule of work using critical path method (CPM) shall indicate the contemplated commencement and completion dates for each major item of work.

- This schedule shall also include the dates of each individual trade or type of work.
- The schedule shall be prepared with a computer program such as Microsoft Project, Primavera, or other approved CPM software.
- The schedule shall show all stages of work to be performed by the Contractor and others and the time necessary to complete each stage.
- The schedule shall show all items to be performed, before the Contractor will be allowed to begin construction, including but not limited to submittals, working/shop drawings, obtaining permits and SWPPP.
- Where the Contractor is to furnish major items or equipment or materials, the schedule shall include the proposed dates of manufacture and shipment of these items, and the names and locations of factories or other sources from which said items are to be obtained.
- The schedule shall show all the various individual submittals, including City review periods and allowances for resubmittals. Submittals shall be scheduled far in advance of construction, to prevent a resubmittal from becoming a Critical Path work item.
- The schedule shall depict all significant construction activities, and shall include all equipment items with a value greater than $10,000 per unit or submittal/fabrication/delivery periods which total an aggregate greater than six months, and all items of work listed by the Contractor in the breakdown of contract prices submitted by the Contractor. The dependencies between activities shall be indicated so that it may be established what effect the progress of any one activity has on the schedule. The critical path shall be clearly indicated.
- The schedule shall show a time period for Contractor to perform Punchlist work and final walk-through.
- The schedule shall use all of the available contract time. The schedule shall show float time where applicable.

The schedule will be reviewed and approved or rejected (and returned for revision), within five (5) working days after receipt by the Engineer. A rejected schedule shall be revised as noted by the City and resubmitted for City approval. This approved schedule shall become the Project Construction Schedule. The Contractor shall adhere diligently to said written schedule in the prosecution of the work. Construction shall conform to the project schedule unless modifications are approved by the Engineer in writing. An updated project schedule shall be prepared by the Contractor when modifications are approved.

The Contractor shall provide a detailed 3-week “look ahead” or “rolling schedule” at the weekly construction meeting.

When the Contractor’s activities have fallen behind schedule by two weeks or more, the Contractor shall submit a proposal for schedule recovery in the monthly progress schedule.

All costs involved in the scheduling of work as herein specified shall be compensated for by the various bid items of this contract and no additional compensation will be made therefore.

C-30 FEDERAL HINDERANCE

In entering into this contract, it is clearly understood by both parties hereto that conditions subsequently may arise resulting from, connected with, or growing out of any war, in which the United States may be engaged, or any national emergency or conditions created directly or indirectly by or for national defense, and which are entirely beyond the control of either party, in accordance with its terms and conditions.

It is, therefore, mutually understood and agreed, anything herein contained to the contrary notwithstanding, that in the event the Contractor shall be prevented from performing the contract or any part thereof by reason of the conditions above stated, the following procedure shall govern.

The Contractor shall in writing, notify the City of his inability to perform, stating in full the reasons e and the probable duration of such inability, if required, he shall also submit proof or evidence in support of his claim of inability to perform.

If it shall appear to the satisfaction of the City Council that the cause of inability to perform arose after the contract was entered into and is beyond the control of the Contractor, the City, pursuant to resolution of the City Council, may:

(a) If lawfully within its power, remove the cause which prevents performance; or

(b) Suspend this contract until the cause of inability to perform is removed; or

(c) With the consent of the Contractor, renegotiate or amend this contract by extending the time of performance or by making changes in the character of the work, or in the materials or equipment required in order to enable performance of the contract; or

(d) Waive performance of that part of the contract which is impossible, or supply substitute materials for those unavailable. Where this remedy is resorted to, the payment due the Contractor shall be diminished to the extent of the work not required to be performed or materials not required to be supplied, based so far as practicable upon unit prices bid.

If none of the foregoing procedures are adopted by resolution of the City Council within thirty (30) days after the City is satisfied and so finds that the Contractor is unable to perform the reasons above stated, then either party hereto may, without incurring any liability, elect to declare this contract terminated upon the ground of impossibility of performance. Upon such termination, the Contractor shall be entitled to proportionate compensation at the contract rate for such portion of the contract as may have been performed.

C-31 SUSPENSION OF CONTRACT

The Engineer may order the Contractor to suspend any work that may be subject to damage by climatic conditions or natural phenomena. When delay is caused by an order to suspend work given on account of such conditions which, in the opinion of the Engineer could have been reasonably foreseen, the Contractor will not be entitled to any extra compensation on account of such order.

If the Contractor fails to begin the delivery of the material, or to commence work as provided in the contract, or fails to make delivery of material promptly as ordered, or to maintain the rate of delivery of material or progress of the work in such manner as in the opinion of the Engineer will insure a full compliance with the contract within the time limit, or if in the opinion of the Engineer, the Contractor is not carrying out the provisions of the contract in their true intent and meaning, a written notice will be served on him to provide within a specified time for a satisfactory compliance with the contract, and if he neglects or refuses to comply with such notice, the Engineer may with the written consent of the City Manager suspend the operation of all or any part of the contract, or the Engineer may in his discretion after such notice, at the expense and for the account of the Contractor, perform any part of the work, or purchase any or all the material included in the contract or required for the completion thereof, without suspending the contract.

Upon suspension of the contract by the Engineer, he may, at his discretion take possession of all or any part of the machinery, tools, appliances, materials and supplies used in the work covered by the contract or that have been delivered by or on account of the Contractor for the use in connection therewith, and the same may be used either directly by the City or by other parties for it, in the completion of the work suspended; or the City may employ other parties to perform the work or may substitute other machinery or material or purchase the materials contracted for in such manner as it may deem proper or hire such force and buy such machinery, tools, appliances, materials and supplies at the Contractor's expenses as may be necessary for the proper conduct and completion of the work. Any cost to the City in excess of the contract price arising from the suspension of the contract, or from work performed or purchases made by the City either before or after suspension, and required on account of the failure of the Contractor to comply with his contract or other orders of the Engineer issued in pursuance thereof will be charged to the Contractor and his sureties, who shall be liable therefore.

A special lien to secure the claims of the City in the event of suspension of the contract is hereby created against any property of the Contractor taken into the possession of the City under the terms hereof, and such lien may be enforced by a sale of such property under the direction of the Council, and the proceeds of the sale, after deducting all expenses thereof, and connected therewith, shall be credited to the Contractor. If the net credits shall be in excess of the claims of the City against the Contractor, the balance will be paid to the Contractor or his legal representatives.

If, in the opinion of the Engineer, an emergency exists for the furnishing of certain material or the performance of certain work in order to insure compliance with the terms of the contract and if the Contractor fails to furnish such material or to perform such work within a reasonable time fixed by written notice from the Engineer to the Contractor, then the Engineer shall have the power to furnish such material or to perform such work at the expense of the Contractor and his sureties who shall be liable therefore.

In the determination of the question whether there has been such non-compliance with the contract as to warrant its suspension or the furnishing of material or the performance of work by the City as herein provided, the decision of the Engineer, when approved by the City Manager and by the Council evidenced by resolution, shall be final and binding upon both parties. Suspension of the contract or any part thereof, shall operate only to terminate the right of the Contractor to proceed with the work covered by the contract or the suspended portions thereof. The provisions of the contract permitting the City to make changes and to make proper adjustment of accounts to cover any increase or decrease of cost on account of such changes, and other stipulations of the contract except those giving the Contractor the right to proceed with work on the items covered by the suspension shall be and remain in full force and effect after such suspension and until the contract shall have been completed and final payment or final adjustment of account made.

The Contractor shall not make any disposition of the plant, machinery, tools, appliances, supplies or materials used on or in connection with the work, either by sale, conveyance or encumbrance, inconsistent with the special lien of the City expressly created by this contract.

C-32 EXTRA WORK FORCE ACCOUNT CHANGE ORDERS

Any and all costs associated with "change" or "extra work force account change orders" must have a Request For Quote (RFQ) assigned in order for said costs to be valid. The Contractor shall not be entitled to any additional compensation for a "change" or "extra work force account change orders" unless same has been authorized in writing (hereafter referred to as "Change Order") which describes the change or extra work to be done and the amount and method of compensation therefore hereafter provided. No Change Order shall be valid unless dated and signed by the Contractor or its agent (previously authorized in writing) and delivered to the City for execution by the City's authorized representative.

Extra work payments must have written approval of the Engineer or assigned representative if less than $5,000. Any amount over $5,000 must obtain prior approval of the City Council, unless specifically noted otherwise.

a. What constitutes a "change" or "extra work force account change orders":

1. A variation between estimated and actual quantities of work or material required to construct a project in accordance with the plans and specifications as they exist at the time the bids are opened, does not constitute a change or extra work; does not require additional authorization, and the said quantities shall be paid for at the unit or lump sum prices established in the bid.

2. A variation between definite quantities of work or material specified in the plans and specifications as they exist at the time bids are opened and upon which quantities unit prices are bid and the quantities required under revised or modified plans and specifications, is a change.

3. The furnishing of material or performance of work for which unit prices have been bid on the basis of estimated quantities, but which materials or work is required to be done under revised or modified plans and specifications, is a change.

4. Revisions or modifications of the plans and specifications such as, but not limited to, those affecting designs, materials, installation or construction or locations are changes.

5. Supplying work or material for which no unit prices have been bid and which are not included in the plans and specifications as they exist at the time bids are opened but which are required under revised or modified plans and specifications is extra work.

b. Work Performed by Contractor – The Contractor will be paid the direct costs for labor, materials and equipment used in performing the work as determined in this subsection, except where agreement has been reached to pay in accordance with subsection b., "Work Performed by Special Forces or Other Special Services."

To the total of the direct costs computed as provided in subsections a.1, a.2, a.3 and a.4 of this Section, C-32, there will be added a markup of 33 percent to the cost of labor, 15 percent to the cost of materials, 15 percent to the equipment rental. To the total of rental costs computed as provided in subsection a.5, there will be added a markup of 15%.

These markups shall be deemed to constitute full compensation for all overhead costs including general and field supervision, bonds, and costs not otherwise designated as direct costs. The total payment made as provided above shall constitute full compensation for performance of the work paid for on a Force Account basis, and no further compensation will be allowed.

When extra work to be paid for on a force account basis is performed by a subcontractor, an additional markup of 5% will be added to the total cost of the extra work, including all markups specified. No more than one 5% subcontractor markup will be allowed. This markup shall compensate the Contractor for additional general and field supervision, bond and administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

1. Labor – The Contractor will be paid the cost of labor for the workers (including working foremen when authorized by the Engineer), used in the actual and direct performance of the work. The cost of labor, whether the employer is the Contractor, subcontractor, or other forces, will be the sum of the following:

   a) Actual Wages – The actual wages paid shall include any employer payments to or on behalf of the workmen for health and welfare, pension, vacation and similar purposes.

   b) Labor Surcharge – To the actual wages, as defined in subsection b.1.a), will be added a labor surcharge set forth in the State of California Department of Transportation publication Labor Surcharge and Equipment Rental Rates, which is in effect on the date upon which the work is accomplished. This surcharge shall be deemed full compensation for all payments imposed by State and Federal laws and for all other payments made to, or on behalf of, the workers, other than actual wages as defined in subsection b.1.a) and subsistence and travel allowance as specified in subsection a.1.c).

   c) Subsistence and Travel Allowance – The actual subsistence and travel allowance paid to such workers.

2. Materials – The City may furnish such materials as it deemed advisable, and the Contractor shall have no claims for costs and markup on such materials.

   Only materials furnished by the Contractor and necessarily used in the performance of the work will be paid for. The cost of such materials will be the cost to the purchaser, whether Contractor, subcontractor or other forces, from the supplier, except as follows:

   a) If a cash or trade discount by the actual supplier is offered or available to the purchaser, it shall be credited to the City even if the discount has not been taken.

   b) If the materials are produced by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to the purchaser, the cost of the materials shall be deemed to be the price paid to the actual supplier as determined by the Engineer plus the actual costs, if any, incurred in the handling of the materials.

   c) If the materials are obtained from a supply or source owned wholly or in part by the purchaser, the cost of the materials shall not exceed the price paid by the purchaser for similar materials furnished from that source on contract items or the current wholesale price for the materials delivered to the job site, whichever is lower.

   d) If the cost of the materials is, in the opinion of the Engineer, excessive, then the cost of the material shall be deemed to be the lowest current wholesale price at which the materials were available in the quantities concerned delivered to the job site, less any discounts as provided in subsection b.2.a).

   e) If the Contractor does not furnish satisfactory evidence of the cost of materials from the actual supplier, the City may establish the cost of materials at the lowest current wholesale prices at which materials were available in the quantities concerned delivered to the location of the work, less any discounts as provided in subsection b.2.a).

3. Equipment Rental (Other than for Owner-Operated Equipment or Rented Dump Trucks). – The Contractor will be paid for the use of equipment at the rental rates listed for equipment in the State of California Department of Transportation publication Labor Surcharge and Equipment Rental Rates, which is in effect on the date upon which the work is accomplished, regardless of ownership and any rental or other agreement, if such may exist, for the use of such equipment entered into by the Contractor, except that for those pieces of equipment with a rental rate of $10.00 per hour or less as listed in the Labor Surcharge and Equipment Rental Rates publication and which are rented from a local equipment agency, other than Contractor owned, the Contractor will be paid at the hourly rate shown on the rental agency invoice or agreement for the time used on force account work as provided in subsection b.3.a). If a minimum equipment rental amount is required by the local equipment rental agency and is so documented, the actual amount charged will be paid to the Contractor.

   If it is deemed necessary by the Engineer to use equipment not listed in the publication, a suitable rental rate for such equipment will be established by the Engineer. The Contractor shall furnish any cost data which might assist the Engineer in the establishment of such rental rates. If the rental rate established by the Engineer is $10.00 per hour or less, the provisions above concerning rental of equipment from a local equipment agency shall apply.

   The rental rates paid as above shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

   Operators of rented equipment will be paid for as provided in subsection a.1.

   All equipment shall, in the opinion of the Engineer, be in good working condition and suitable for the purpose for which the equipment is to be used.

   Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates.

   Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

   Individual pieces of equipment or tools not listed in the publication and having a replacement value of $500 or less, whether or not consumed by use, shall be considered to be small tools, and shall be deemed to be compensated for under markup provisions.

   Rental time will not be allowed while equipment is inoperative due to breakdowns.

   a) Equipment on the Work – The rental time to be paid for equipment on the work shall be the time the equipment is in operation on the extra work being performed, and in addition, shall include the time required to move the equipment to the location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original location, except that moving time will not be paid for if the equipment is used at the site of the extra work on other than extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made if the equipment is used at the site of the extra work on other than extra work.

      The following shall be used in computing the rental time of equipment on the work:

      1) When hourly rates are listed, less than 30 minutes of operation shall be considered to be ½ hour of operation.

2) When daily rates are listed, less than 4 hours of operation shall be considered to be ½ day of operation.

b) Equipment on the Work – For the use of equipment moved in on the work and used exclusively for extra work paid for on a force account basis, the Contractor will be paid for the time the equipment is in use and also for the cost of transporting the equipment to the location of the work and its return to its original location, in accordance with the following:

1) The original location of the equipment to be hauled to the location of the work shall be agreed to by the Engineer in advance.
2) The City will pay the costs of loading and unloading such equipment.
3) The cost of transporting equipment in low bed trailers shall not exceed the hourly rates charged by established haulers.
4) The cost of transporting equipment shall not exceed the applicable minimum established rates of the Public Utilities Commission.
5) The rental period shall begin at the time the equipment is unloaded at the site of the extra work, shall include each day that the equipment is at the site of the extra work, excluding Saturdays, Sundays, and legal holidays unless the equipment is used to perform the extra work on those days, and shall terminate at the end of the day on which the Engineer directs the Contractor to discontinue the use of such equipment. The rental time to be paid per day will be in accordance with the following:

Hours Equipment Is in Operation	Hours to be paid
0	4
0.51	4.25
1	4.5
1.5	4.75
2	5
2.5	5.25
3	5.5
3.5	5.75
4	6
4.5	6.25
5	6.5
5.5	6.75
6	7
6.5	7.25
7	7.5
7.5	7.75
8	8
Over 8	use hours in operation

The hours to be paid for equipment which is operated less than 8 hours due to breakdowns, shall not exceed 8 less the number of hours the equipment is inoperative due to breakdowns.

When hourly rates are listed, less than 30 minutes of operation shall be considered to be ½ hour of operation.

When daily rates are listed, payment for ½ day will be made if the equipment is not used. If the equipment is used, payment will be made for one day.

The minimum rental time to be paid for the entire rental period on an hourly

basis shall not be less than 8 hours or if on a daily basis shall not be less than one day.

6) Should the Contractor desire the return of the equipment to a location other than its original location, the City will pay the cost of transportation in accordance with the above provisions, provided the payment does not exceed the cost of moving the equipment to the work.

7) Payment for transporting, and loading and unloading equipment will not be made if the equipment is used on the work in any way other than upon extra work paid for on a force account basis.

When extra work, other than work specifically designated as extra work in the plans and specifications, is to be paid for on a force account basis and the Engineer determines that such extra work requires the Contractor to move on to the work equipment which could not reasonably have been expected to be needed in the performance of the contract, the Engineer may authorize payment for the use of such equipment at equipment rental rates in excess of those listed as applicable for the use of such equipment subject to the following additional conditions:

(a) The Engineer shall specifically approve the necessity for the use of particular equipment on such work,
(b) The Contractor shall establish to the satisfaction of the Engineer that such equipment cannot be obtained from its normal equipment source or sources and those of its subcontractors,
(c) The Contractor shall establish to the satisfaction of the Engineer that the proposed equipment rental rate for such equipment from his proposed source is reasonable and appropriate for the expected period of use.
(d) The Engineer shall approve the equipment source and the equipment rental rate to be paid by the City before the Contractor begins work involving the use of the equipment.

4. Owner-Operated Equipment (Except Owner-Operated Dump Trucks) – When owner-operated equipment is used, the Contractor will be paid for the equipment and operator, as follows:

Equipment rental payment will be made in accordance with the provisions in subsection a.3.

Operator rate payment will be made at the rates paid by the Contractor to other workmen operating similar equipment already on the project in accordance with subsection b.1.a) or, in the absence of such other workmen, at the rates for such labor established by collective bargaining agreements for the type of workman and location of the work, whether or not the owner-operator is actually covered by such an agreement.

To the direct cost of equipment rental and labor will be added the markups for equipment rental and labor as provided in subsection a.

5. Dump Truck Rental – Dump truck rental for Contractor- or Subcontractor-owned dump trucks shall conform to the provisions of subsection a.3 of this Section, C-32.

Dump truck rental for rented or owner-operated dump trucks will be paid for at the same hourly rate paid by the Contractor when performing contract work.

In the absence of contract item work requiring dump truck rental, the Engineer will establish an hourly rental rate to be paid. The Contractor shall provide the Engineer with complete information on the hourly rental rates available for rental or fully maintained and operated dump trucks plus mark-up as described in Section C-32.

Invoices shall be submitted to show actual rental rates paid.

c. Work Performed by Special Forces or Other Special Services – When the Engineer and the Contractor, by agreement, determine that a special service or an item of extra work cannot be performed by the forces of the Contractor or those of any of its subcontractors, such service or extra work item may be performed by a specialist. Invoices for this service or item of extra work, on the basis of current market prices, may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization.

In those instances where a Contractor performs extra work requiring a fabrication or machining process in a facility away from the job site, the charges for that portion of the extra work performed in such facility may, by agreement, be accepted as a specialist billing.

To the specialist invoice price, less a credit to the City for any cash or trade discount offered or available, whether or not such discount may have been taken, will be added a markup of 15 percent. This markup shall be deemed to constitute full compensation for all overhead costs including general and field supervision, bonds, and costs not otherwise designated as direct costs. The total payment made as provided above shall constitute full compensation for performance of the work paid for on a force account basis, and no further compensation will be allowed.

d. Records – The Contractor shall maintain its records in such a manner as to provide a clear distinction between the direct costs of extra work paid for on a force account basis and the costs of other operations.
From the above records, the Contractor shall furnish reports using the City's Daily Extra Work Report form, for each day's extra work to be paid for on a force account basis. The daily extra work reports shall itemize the materials used, the direct hours of labor and equipment rental used, and work performed by special forces or other special services. The daily extra work reports shall provide names or identifications and classifications of workers, the hourly rate of pay and hour worked, and also the size, type, code and identification number of equipment, and hours operated.

Each day (or at the latest, the following work day), the Contractor shall sign the daily extra work report and obtain the City Inspector's acknowledgement (by signature) that the recorded hours and quantities are correct, and give the City its (yellow) copy of the report.

When the extra work is complete, the Contractor shall complete the daily extra work reports by adding rates, costs and markups, and submit under the RFQ number. The completed original daily extra work reports shall be submitted for payment under cover of the City's Daily Extra Work Summary Report form. Costs of material and special services shall be substantiated by valid copies of vendor or service provider invoices.

The Engineer will compare the submitted reports with the copy of the reports submitted on a daily basis as the work was being performed and shall inform the Contractor in writing if the report is unacceptable and the reasons therefore. If rates, material and service costs and markups are accepted by the Engineer, these completed reports will form the basis of payment.

C-33 SUPERINTENDENCE

The Contractor shall have on the job at all times a competent superintendent, experienced in the type of work

being constructed, employed by the Contractor, who can speak, read, and write in English, and shall represent the Contractor. All direction given by the City to the superintendent shall be as binding as if given directly to the Contractor.

C-34 CHARACTER OF WORKERS

Only competent skilled supervisors and workers shall be employed on the work. Where the work requires special qualifications or training, only forepersons and workers with the required training or qualifications shall perform the work. If required by the Engineer, the Contractor shall discharge any person who commits trespass or is, in the opinion of the Engineer, disorderly, dangerous, insubordinate, incompetent, or otherwise objectionable. Such discharge shall not be the basis of any claim for compensation or damages against the City of Milpitas or any of its officers, employees or agents.

C-35 SOUND CONTROL

Sound control shall conform to the provisions in Section 7-1.011, "Sound Control Requirements," of the Caltrans Standard Specifications or City of Milpitas Ordinance, "No person shall engage or permit others to engage in construction of any building or related road or walkway, pool or landscape improvement or in the construction operations related thereto, including delivery of construction materials, supplies, or improvements on or to a construction site except within the hours of 7:00 a.m. to 7:00 p.m., on weekdays and weekends." No construction is permitted on the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. Exception to this ordinance shall be "Emergency construction and repair that is necessary for protection of life and property." and "Operation to construct and maintain facilities within the public right-of-way as deemed necessary by the Public Works Director."

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

C-36 WORKING HOURS

The normal working hours are between the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday excluding weekends and City Holidays, unless otherwise approved by the Engineer in writing. Further restrictions may be specified in Section C-39, Lane Closure Restrictions, Section C-40, Public Convenience and Safety, and the Technical Specifications. Contractor may elect to work longer hours and/or on weekends to meet the project schedule. The Contractor shall give a minimum of three (3) working days notice to the Engineer for any work scheduled outside of the regular working hours so that inspection staff can be scheduled. No work shall be allowed on Saturdays, Sundays, or holidays without prior written approval of the Engineer, but work on such days will be acceptable with proper notice. The hours and days of work may be altered, by the Engineer, to accommodate the efficient movement of traffic without additional compensation due to the Contractor.

C-37 CONTRACTOR'S USE OF PREMISES

The area in which the Contractor may operate is restricted to only those areas indicated on the drawings or as otherwise specified in writing by the Engineer. The Contractor shall confine all access, storage, and construction activities to this area, without exception, unless otherwise authorized in writing by the Engineer.

C-38 PROTECTION AND CLEANUP

The scope of this project includes the protection of all work until completion of all the work and removal of all excess construction equipment, materials and debris from the site, in accordance with these specifications or as otherwise specified in writing by the Engineer. The Contractor shall be responsible for repair or replacement of work damaged due to any vandalism prior to completion of the work.

C-39 LANE CLOSURE RESTRICTIONS

No lane closure will be permitted in any of the major commute streets in the direction of the commute during commute hours. The major commute streets are identified as, but not limited to, Montague Expressway, East Calaveras Boulevard, West Calaveras Boulevard, Jacklin Road, Dixon Landing Road, South Park Victoria Drive, North Park Victoria Drive, Piedmont Road, North Milpitas Boulevard, South Milpitas Boulevard, North Abel Street, South Abel Street, McCarthy Boulevard, Alder Drive, Great Mall Parkway, Tasman Drive and Capital Avenue. This means that no construction signs, delineators, cones, or any other construction type signs or appurtenances may be placed in or near the lane that will cause slowing of traffic prior to the times listed below:

Commute hours are defined as:

Morning commute:	6:00 a.m. to 9:00 a.m.
Afternoon commute:	3:00 p.m. to 7:00 p.m.

Additional lane closure restrictions may be imposed if there is evidence that excessive inconvenience to the public is observed during construction.

Any lane closure requires the submittal of a Traffic Control Plan. The Traffic Control Plan shall provide for the orderly and predictable movement of all traffic and pedestrians and for such guidance and warning as needed to ensure the safe and informed operation of individual elements of the traffic stream. Contractor shall not detour traffic or close lanes until the Traffic Control Plan has been approved by the Engineer.

C-40 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall, at all times, provide for "Public Convenience and Safety," as described in the City Standard Specifications, OSHA, and State of California Safety regulations.

The Contractor shall schedule and conduct the work so as to minimize the inconvenience to the public, as well as to City employees at any City facilities and adjoining areas impacted by the work. Any phase of the work which requires disruption of utilities shall be scheduled at least three (3) days in advance with the affected parties.

Adequate warning and construction signs shall be maintained at the construction site for the safety of the public. Additional signs for the convenience of the public shall be maintained as directed by the Engineer.

The Contractor shall maintain sufficient safeguards against occurrences of accidents, injuries, or damage to any person or property and shall be responsible for same if such occurs. The Contractor shall also maintain adequate protection of its work and materials from destruction and loss and shall protect the Engineer's property from damage arising in connection with this contract, and shall make good any such damage, destruction, or loss.

Per Chapter 23 of the City of Milpitas Municipal Code, Ordinance 196.6, Noise Abatement, construction work including the delivery of equipment and materials shall occur only between the hours of 7:00 a.m. and 7:00 p.m. weekdays and weekends, unless an exception is granted by the Public Works Director, or designated representative. Exceptions will be considered only when, in the opinion of the Engineer, construction during the above period would inconvenience the public and neighboring residents more than working at other hours or on weekends. Exceptions will not be granted merely to expedite the construction work.

C-41 SAFETY

In addition to the provisions of Accident Prevention Barricades, Lights, Safety Measures & Detours of the General Conditions, the Contractor shall provide for the safety of traffic and the public in accordance with the provisions in Section 7-1.09, "Public Safety," of the Caltrans Standard Specifications and these special provisions. The Contractor shall install temporary railing (Type K) between any lane carrying public traffic and any excavation, obstacle, or storage area when the following conditions exist:

(1) Excavations:--Any excavation, the near edge of which is 12 feet or less from the edge of the lane, except:
   (a) Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
   (b) Excavations less than one foot deep.
   (c) Trenches less than one foot wide for irrigation pipe or electrical conduit, or excavations less than one foot in diameter.
   (d) Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
   (e) Excavations in side slopes, where the slope is steeper than 4:1.
   (f) Excavations protected by existing barrier or railing.

(2) Temporarily Unprotected Permanent Obstacles:--Whenever the work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle prior to installing the protective system, or whenever the Contractor, for his convenience and with permission of the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.

(3) Storage Areas:--Whenever material or equipment is stored within (12') of the lane and such storage is not otherwise prohibited by the specifications.

The approach end of temporary railing (Type K), installed in accordance with the requirements in this section "Public Safety" and in Section 7-1.09, "Public Safety," of the Caltrans Standard Specifications shall be offset a minimum of (15') from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than one foot transversely to 3.0 meters (10') longitudinally with respect to the edge of the traffic lane. If the (15') minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Temporary railing (Type K) shall conform to the provisions in Section 12-3.08, "Temporary Railing (Type K)" of the Caltrans Standard Specifications, except temporary railing (Type K) fabricated prior to January 1, 1993, with one longitudinal No. 5 reinforcing steel bar near the top in lieu of the 2 longitudinal No. 5 reinforcing steel bars near the top, as shown on the plans, may be used.

Except for installing, maintaining and removing traffic control devices, whenever work is performed or equipment is operated in the following work areas, the Contractor shall close the adjacent traffic lane unless otherwise provided in the specifications:

Approach speed of public traffic (Posted Limit) (Miles Per Hour)	Work Areas
35 to 45	Within (3') feet of a traffic lane, but not on a traffic lane.

The lane closure provisions of this section shall not apply if the work area is protected by permanent or temporary railing or barrier.

When traffic cones or delineators are used to delineate a temporary edge or traffic lane, the line of cones or delineators shall be considered to be the edge of traffic lane, however, the Contractor shall not reduce the width of an existing lane to less than 3.0 meters (10') without written approval from the Engineer.

When work is not in progress on a trench or other excavation that required closure of an adjacent lane, the traffic cones or portable delineators used for the lane closure shall be placed off of and adjacent to the edge of the traveled way. The spacing of the cones or delineators shall be no more than the spacing used for the lane closure.

Suspended loads or equipment shall not be moved nor positioned over public traffic or pedestrians.

Full compensation for conforming to the requirements in this section "Public Safety," including furnishing and installing temporary railing (Type K) and temporary crash modules, shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefore.

C-42 DUST

During the performance of all work under this Contract, the Contractor shall assume full responsibility for dust control and shall furnish all labor, equipment and means required to carry out proper and efficient measures wherever and whenever dust control is necessary to prevent construction operations from producing dust damage and nuisance to persons and property. The goal is NO VISIBLE DUST. Unless otherwise permitted by the Engineer, at least one mobile unit, suitably equipped for dust control and with a minimum capacity of 1,000 gallon shall be available for applying water. Any claims resulting from dust damage or nuisance shall be borne solely by the Contractor. In the event that Contractors fails to timely address valid claims, the Engineer may, at its sole discretion, settle the claims and deduct from any sums due the Contractor.

Continuous dust control is a critical requirement and will be vigorously enforced. Strong, effective dust control and air quality protection measures are critical throughout this project. Sensitive equipment is in use at the project site, and dust is known to harm the equipment. Contractor shall implement additional dust control measures, as directed by the Engineer and at no additional expense to the City, if generation of dust and airborne particles has not been minimized. Measures that Contractor shall implement include but are not limited to the following:

- Water all active construction areas at least twice daily or as needed.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily or as needed, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily if visible soil material is carried onto adjacent public streets.

- Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc).
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

C-43 STORM WATER POLLUTION PREVENTION & EROSION CONTROL PLAN

In the process of constructing this project, the Contractor shall comply with all requirements, conditions, recommendations, and provisions of all permits issued for this project. The Contractor shall also comply with all local, State, and Federal laws or requirements related to storm water quality and urban runoff management.

The Contractor during the execution of its work; shall not allow the operations of work to contaminate storm water runoff. The Contractor shall not allow any contaminated discharges from the project site to enter any storm drain, creek, or water course within the City of Milpitas. All de-watering operations in conformance with Section C-44 must be reviewed and approved by the City Engineer in writing prior to commencement.

The Contractor upon completion of any grading or scarifying operations shall protect all barren and exposed earth areas from erosion or concentrated drainage. The Contractor shall install adequate erosion protection both during and after these operations of work to prevent erosion.

The Contractor shall create and submit a Storm Water Pollution Prevention Plan (SWPPP) and an Erosion Control Plan as specified in Section D-01.1 of the Special Conditions and as specified by the Technical Specifications, Section E-05. The Contractor shall not start work without City approval of the plan, including installation of all specified SWPPP and Erosion Control facilities.

The Contractor shall not discharge any turbid water from the project site that exceeds 50 Ntu.'s. The Contractor shall establish a base line for turbidity by testing pre-construction waters of any water course the contractor intends to discharge to. The Contractor shall test the diverted creek waters weekly for turbidity and report the findings to the City Engineer.

The Contractor is advised that due to the limited City right of way, and in conformance with the permit requirements for this project, no suitable location for concrete wash-out facilities may exist. The Contractor may be required to off- haul all concrete waste for suitable disposal off site.

The SWPPP and the Erosion Control Plan submitted by the Contractor shall be a written document that states in detail how the Contractor shall prevent any materials or contaminated runoff from entering a storm drain, creek, or water course within the City during the Contractor's operations of work. The SWPPP and the Erosion Control Plan shall include a description of each major item of work specified within the Contract Documents (grading, paving, concrete, etc), and it shall show locations of stockpile, staging, equipment storage, cleaning, fueling, repair, or parking. The SWPPP and the Erosion Control Plan shall include a detailed description of how the Contractor plans to complete each major item of work in a way that prevents contamination and sediment from entering the storm drain. Examples of this might include use of sediment containment sacks in storm inlets, covering materials in storage, use of drip pans under equipment, use of Best Management Practices (BMP) for construction work, uses of specific sediment control materials. The SWPPP and the Erosion Control Plan shall include a list of any materials or products and equipment the Contractor intends to utilize to prevent sediment and contamination from entering storm drains. The SWPPP and the Erosion Control Plan shall also include a drawing showing the locations the Contractor intends to install erosion control measures to protect exposed or denuded areas from erosion and concentrated drainage flows, and other applicable water courses specified within these Contract Documents.

All SWPPP and Erosion Control Plan protective measures shall be in place during all phases of construction. The Contractor shall be responsible for maintenance and up-keep of the SWPPP/Erosion Control facilities installed, including required inspections and replacement of damaged facilities. The Contractor shall immediately replace facilities that are found to be ineffective.

Street Sweeping:
The Contractor shall at the end of each working day, or as directed by the Engineer, clean and sweep all roadways, sidewalks, gutters, and paved areas within the project site of all materials deposited by, attributed to, or involved in the work. Water shall not be used to wash down streets in place of sweeping.

Waste Disposal:
The Contractor shall at the end of each working day, collect and properly dispose of all scrap, debris, and waste material. Hazardous material disposal shall be done in accordance will all local, state, and federal laws.

Hazardous Material Storage:

1. The Contractor shall label and store all hazardous materials, such as pesticides, paints, thinners, solvents, and fuels; and all hazardous wastes, such as waste oil and antifreeze; in accordance with all applicable State and Federal regulations.
2. The Contractor shall store all hazardous materials and all hazardous wastes in accordance with secondary containment regulations, and it is recommended that these materials and wastes be covered, as needed, to avoid potential management of collected rain water as a hazardous waste.
3. The Contractor shall keep an accurate, up-to-date inventory, including Material Safety Data Sheets (MSDSs), of hazardous materials and hazardous wastes stored on-site, to assist emergency response personnel in the event of a hazardous materials incident.

The first progress payment will not be made until the Stormwater Pollution Prevention Plan has been submitted and favorably reviewed.

Full compensation for the Storm Water Pollution Prevention Plan (SWPPP) and the Erosion Control Plan, including plan preparation and implementation of the approved plan, inspections, dust control, street sweeping, waste disposal, and hazardous material storage shall be considered as included in the various contract items paid and no additional compensation will be allowed therefore.

C-44 DE-WATERING OPERATIONS

The Contractor shall obtain written approval of all de-watering operations (including removal of water contained in structures to be demolished) from the Engineer prior to the start of these operations. The Contractor shall provide in writing to the Engineer an estimate of the duration and quantity of the water to be removed during the de-watering operation. Sediment traps, sediment basins, or baker tanks shall be utilized to remove settleable solids from the water prior to disposal. Further treatment of the water following the use of sediment traps, sediment basins, or banker tanks may be required as directed by the Engineer or to meet applicable discharge requirements/limitations.

The Contractor shall contact the Regional Water Quality Control Board (John West, (510) 622-2438) for approval and to receive a permit for any groundwater pretreatment process where discharges to a storm drain, creek, or watercourse are proposed.

The Contractor shall contact the San Jose, Santa Clara Water Pollution Control Plant (Paul Alexa, Source Control (408) 945-3035) for approval and to receive a permit for any discharges into the sanitary sewer.

Water from de-watering operations may be disposed of into the City's storm drain system or sanitary sewer system with approval from the Engineer, the Regional Water Quality Control Board and the Santa Clara Water Pollution Control Plant. Prior to disposal of any water from de-watering operations, the Contractor shall have the water analyzed by a qualified lab for the following constituent concentrations, and provide the lab results to the Engineer. Water from the de-watering operations exceeding the effluent limits shown in the table below shall not be discharged into the City's storm drain or sanitary sewer, unless treated to meet the applicable limits. Water exceeding these effluent limits may also be disposed of in an acceptable legal manner at an off-site

recycling or disposal facility.

Effluent Limit Guidelines (micrograms/liter, ug/L)
(Note: 1µg/L = 1000ppb)

Constituent	Maximum for Storm Drain Discharge	Maximum for Sanitary Sewer Discharge
Lead	81.6	400
Mercury	2.4	10
Selenium	238	2000
Zinc	117	2600
Copper	63.6	2700
Chemical Oxygen Demand (COD)	200	--
Total Suspended Solids (TSS)	100,000	--
Biochemical Oxygen Demand (BOD)	30,000	--
Total Kjeldahl (as N)	19,000	--
Arsenic	168	1,000
Oil and Grease	10,000	150,000
Cadimum	15.9	700
Iron	1,000	--
Nitrite and Nitrate (as N)	680	--
Phosphorous	2,000	--
pH	6.5 - 8.5	Lower than 6.0 Higher than 12.5
Aluminum	750	--

Constituent	Maximum for Storm Drain Discharge	Maximum for Sanitary Sewer Discharge
Cyanide	-	500
Nickel	-	2,600
Silver	-	700
Chromium, Total	-	1,000
Beryllium	-	750
Antimony	-	5,000
Xylene	-	1,500
Phenol & Derivatives	-	30,000
Total Toxic Organics (TTO)	-	2,130
Manganese	-	35,000

The Contractor shall not discharge any turbid water from the project site that exceeds 50 Ntu.'s. The Contractor shall establish a base line for turbidity by testing pre-construction waters of Coyote Creek and any other water courses that could be affected by construction. The Contractor shall test the diverted creek waters weekly for turbidity and report the findings to the City Engineer.

The Contractor is advised that this is not a comprehensive list, and other constituents and constituent levels of concern may be required to be determined. All analysis shall include detection limits and documentation that the analytical laboratory was Department of Health certified for the constituents analyzed.

The Contractor is further advised that any toxic or poisonous substances, or any other pollutant in sufficient quantity which could injure or cause an interference with the sewage treatment process shall not be discharged in the sanitary sewer system.

Any toxic or poisonous substances, or any other pollutant in sufficient quantity which may be deemed as to constitute a hazard to humans or animals shall not be discharged in the sanitary sewer system.

De-watering operations including obtaining all agency permits and approvals and preparation of a de-watering plan and implementation of the approved plan, shall be considered as included in the various contract items paid and no additional compensation will be allowed therefore.

C-45 TEMPORARY FACILITIES AND UTILITIES

a. Temporary lighting during the period of construction, if necessary, shall be supplied and maintained by the Contractor at its own expense so that construction work can be properly and safely performed.

b. Temporary wiring and electrical facilities shall be in compliance with applicable provisions of Electrical Safety Orders, OSHA of the State of California

c. The Contractor shall provide, maintain, and remove upon completion of work, temporary utilities and construction required for performance of the work, and safety of personnel.

C-46 PROTECTION OF TRAFFIC SIGNAL DETECTION AND OTHER FACILITIES

The Contractor shall give at least 72 hours advance notice to the Engineer before commencing any street work (such as pavement grinding or trenching) that may potentially damage any traffic signal detection loop wires or any other signal facility. The requirement is in addition to any Underground Services Alert notification action by the Contractor. The Engineer will mark underground traffic signal facilities.

The Contractor shall not proceed with any grinding, trenching, or other underground work until it has been verified with the Engineer that signal facilities have been marked.

The Contractor shall be responsible for all damage to traffic signal facilities arising from failure to properly comply with these provisions.

In the event that the Contractor's construction activities cause any failure of a traffic facility, it shall be repaired and be made fully operable within 24 hours of the damage occurring. In the event that such repair is not undertaken within this time limit, the Engineer will repair the facility and deduct the cost from monies due to the Contractor. The amount deducted will consist of the repair cost plus a 25% markup for administrative costs.

C-47 PERMANENT UTILITY CONNECTIONS

The Contractor shall coordinate with the proper agencies for any utility connections required. Contractor shall be responsible for distribution of power or water to points of use.

C-48 REMOVAL OF USA MARKINGS

All Underground Services Alert (USA) markings on concrete or asphaltic pavement or other structures shall be completely removed when they are no longer required and prior to final walk-through, before City acceptance of the work.

C-49 CONSTRUCTION INSPECTOR'S WORK HOURS

a. The Contractor shall give the Engineer one working day’s notice before beginning work so the Engineer's inspection of the work can be arranged.

b. Regular working hours for the Construction Inspectors are between 7:00 a.m. and 3:30 p.m., Monday through Friday. If the Contractor wishes to work before 7:00 a.m. or after 3:30 p.m., or more than 8 hours in any given day, the Contractor may be charged the cost of overtime for the Inspector.

C-50 ADDITIONAL TESTS AND INSPECTIONS

When in the opinion of the Engineer, additional tests or inspections are required because of the manner in which the Contractor executes the work, such tests and inspections shall be paid for by the Contractor.

C-51 WAGE RATES

In accordance with Section 1773 et seq. of the Labor Code of the State of California, the Director of the Department of Industrial Relations of the State of California has established the prevailing or current rate of per diem wages to be paid to laborers, workers and mechanics for all work done under or by virtue of this contract. Copies of said prevailing wage rates are on file in the office of the City Engineer and will be made available to the Contractor. A copy of said wage rate shall be posted on the job site by the Contractor.

The rate for work performed on Sundays and such legal holidays as are designated by the Council by ordinance, and for work performed in excess of eight (8) hours in one working day, in such cases in which such overtime is permitted by law, is not less than one and one-half (1-1/2) times the above described prevailing rate of per diem wages.

The Contractor and his subcontractors shall not pay less than said rates and the Contractor shall forfeit as a penalty to the City, the sum of Twenty-five dollars ($25.00) for each workers for each working day such workers is paid less than the above stipulated rates for any work done under or by virtue of this contract by him or her or by any subcontractor under him or her.

C-52 REPORTS

The Contractor shall keep or cause to be kept an accurate record showing the names and occupation of all laborers, workers, or mechanics employed by him or her or by any subcontractor under him or her in connection with the work and also showing the actual hours worked and actual wages paid to each of such workers, which record shall be open at all reasonable hours to the inspection of the Engineer and to the Chief of the Division of Labor Law Enforcement of the Department of Industrial Relations, his or her deputies and agents as required of Section 1776 of the Labor Code of the State of California and shall be submitted upon request.

C-53 MATERIALS AND SAMPLES

The Contractor shall submit the material information for City review when specified, prior to ordering.

All materials shall be of specified quality and fully equal to samples, where samples are required. Whenever requested and free of charge, the Contractor shall furnish to the Engineer for test; samples of all materials proposed to be used in the work. Rejected materials must be immediately removed from the site of the work by the Contractor and shall not be brought again upon the work.

C-54 MATERIALS FURNISHED BY THE CITY

In cases where the City furnishes all or a portion of the equipment or materials to be used in the work under this contract, ("materials"), the Contractor shall accept delivery of such materials as may be provided. If the Contractor is required to haul such materials under this contract to the job site, the Contractor shall pick them up promptly after notification by the Engineer, and shall pay at his or her own cost any demurrage or other charges which have accrued due to his or her failure to pick up said materials promptly.

The Contractor shall be responsible for said materials from the time of receipt until final acceptance of the work, and the materials shall be replaced or repaired at his or her own cost in a manner satisfactory to the Engineer, in the event said materials which are lost or damaged after the Contractor's receipt of same.

Any City furnished materials which remain unused at the completion of the work shall be delivered by the Contractor to the City's storage yard designated by the Engineer.

All compensation to be received by the Contractor for handling and protecting City furnished material shall be included in the contract price, and no extra compensation will be paid to the Contractor for complying with the provisions of this section.

C-55 DISPOSAL OF MATERIALS/SALVAGE

All unsuitable materials including, but not limited to, broken concrete and paving materials, pipe, vegetation, excess earth, mud or soil that cannot be compacted to specifications, debris, etc., shall be removed from the job site and disposed of by the Contractor in a safe and legal manner, all to the satisfaction of the Engineer. The hauling and disposal of materials off the job site shall be performed by the Contractor and the costs shall be included in the various bid items of this contract. As required and directed, certain items removed from the construction area during contract work may be deemed salvageable by the Engineer and said items shall be delivered to and title transferred to, the City.

C-56 MATERIALS AT JOB SITE

The Contractor shall notify the Engineer at least two (2) working days before bringing any materials on the job so that they may be checked out or tested for compliance with specifications. Materials brought on the site without prior acceptance may be ordered off the work and the Contractor may not be entitled to any extension or remedy for the time lost while waiting for, making, and obtaining results of tests.

Materials for which the source was approved but which do not conform to specifications when delivered at the job may be rejected. When doubt as to compliance with specifications exists, compliance with specifications will be checked or tested, and the decision of the Engineer as to the suitability of the material shall be final.

Any weight tickets shall be made out to the "City of Milpitas, Main Sewage Pump Station Demolition Phase I, Project No. 6079" and weight tickets shall be furnished to the inspector for each load of asphalt concrete, aggregate base, or slurry. Contractor shall furnish copies of individual day scale sheets.

C-57 RECYCLING, DISPOSAL AND MATERIALS REUSE

All unsuitable materials including, but not limited to broken concrete and paving materials, pipe, vegetation, and other unsuitable materials, excess earth, debris, etc., shall be removed from the job site for recycling and disposal by the Contractor all to the satisfaction of the City Engineer or designee. The Contractor shall, to the maximum extent possible, reuse any useful construction materials generated during the project. The Contractor shall recycle all paving materials including, but not limited to aggregate base material, asphalt, and concrete. The Contractor shall perform all recycling and disposal of material by removing the material from the job site or

processing the material on site for use as suitable fill and backfill material or paving material. Actual recycling and disposal costs and tonnage amounts shall be submitted to the Engineer as evidence of recycling prior to request and approval for item payment. As required or directed, certain items to be removed from the construction area during contract work may be deemed salvageable by the City Engineer or designee. The Contractor shall deliver said items to a location within the City.

The following Demolition Recycling Report Process shall be used to report reused and recycled materials, and any other source reduction activities.

DEMOLITION RECYCLING REPORT PROCESS

City of Milpitas demolition plans require submittal of and compliance with this Recycling Report process. If you have any questions regarding this process, call Leslie Stobbe at 408-586-3352 or Elizabeth Koo at 408-586-3353.

1. **Prior to demolition permit issuance**, the Contractor shall submit Part I of a Recycling Report on business letterhead to the City Engineer. This initial report must be approved by the City's Utility Engineering/Solid Waste Section prior to demolition permit issuance. The report shall describe these resource recovery activities:
   1) What materials will be salvaged.

   2) How materials will be processed during demolition.

   3) Intended locations or businesses for reuse or recycling.

   4) Quantity estimates in tons (both recyclable and for landfill disposal). Estimates for recycling and disposal tonnage amounts by material type shall be included as separate items in all reports to the Building Division before demolition begins.

   Contractor shall make every effort to salvage materials for reuse and recycling.

2. Prior to completion of demolition, Contractor shall submit Part II of the Recycling Report to the Building Division, for forwarding to the City's Utility Engineering/Solid Waste Section, which confirms items 1 – 4 of the Recycling Report, especially materials generated and actual quantities of recycled materials. Copies of weight tags and/or receipts of "end dumps" shall support part II of the Recycling Report. Actual reuse, recycling and disposal tonnage amounts (and estimates for "end dumps") shall be submitted to the Utility Engineering/Solid Waste Section prior to City Public Works inspection.

C-58 RECYCLED CONTENT PURCHASING

To the maximum extent possible, the Contractor shall purchase materials for roadway, median, and other public right-of-way areas with a minimum 50% post-consumer recycled content. Such products include, but are not limited to asphalt, aggregate base material, bark and mulch.

C-59 TESTING AND MATERIALS

The City shall require the testing of materials by a competent testing laboratory of its selection subject to its approval or by other means. The cost of the materials to be tested, delivered to the point of testing, shall be borne by the City.

In the event additional testing is requested by the contractor, or required because of failed tests refer to Section C-50, Additional Tests and Inspections.

C-60 WATER

Construction water will be made available to the Contractor from an existing fire department connection on the City recycled water line at the construction site This water will be provided free of charge by the City. If there is a need for a second source of water during construction, existing fire hydrants are located near the site. If the fire hydrants are used, the Contractor shall apply for a City construction water meter at the City Hall Finance Counter prior to the beginning of work. A security deposit of **(contractor to call for current price)** is required for the construction water meter from which the meter rental fee and cost of water will be deducted. If the rental fee and the water costs exceed the deposited, an invoice will be issued to the contractor for payment.

All required water, all work and materials required for obtaining, pumping, transporting and applying and otherwise disposing of said water shall be in an approved manner and shall be performed by, and at the expense of the Contractor and no extra or separate compensation will be made.

C-61 RIGHT-OF-WAY

The right-of-way for work to be constructed under this contract will be provided by the City unless otherwise stated. Right-of-way agreements may be inspected at the office of the Engineer.

C-62 WORK LIMITS

The Contractor shall confine all of its operations to within the public right-of-way and/or easements. Stock piling of materials and storage of materials and equipment shall be within the confines of the existing, fenced pump station site and are subject to the approval of the Engineer. Pedestrian and vehicular access, outside of the immediate limits of construction, shall be maintained as directed by the Engineer.

C-63 CARE AND CUSTODY OF WORK

The Contractor shall have full care and custody of the work until completion and acceptance by Resolution of the City Council and he or she shall be responsible for all damage to existing improvements during the time the work is in his or her care and custody. The Contractor shall protect all such work both before and after being set in place to prevent damage, breakage, misuse or disfigurement of any of the work, materials, or equipment.

C-64 AS-BUILT DRAWINGS

a. As-Built Drawings - The Contractor shall maintain a "job site" print of contract drawings and favorably reviewed shop drawings on the construction site at all times. These "job site" drawings are to be marked up daily with red ink or red pencil to record:

   1. where actual installation differs from that shown on the original drawings,

   2. where underground or concealed features are uncovered during the work, whether unforeseen or not,

   3. field changes or deletions to the work,

   4. additional work, whether by Contract Change Order or not.

Underground features and features that are concealed during construction, or work that is added or changed, shall be recorded by both scaling and dimensioning. Elevation shall be recorded accurately to 0.1' and plan dimensions to 0.25'.

Maintenance of the "job site" As-built drawings on a daily basis will be subject to specific inspection by the Engineer. An additional 10% of progress payment requests may be withheld in the event that the Engineers inspection determines that the As-built drawings have not been kept up-to-date on a daily basis.

Each "job site" as-built drawing print shall be stamped "Contractor's As-Built Drawing" and signed and dated by the Contractor's representative.

a. As-Built Drawings Submittal - As-built drawing sheets shall be organized into a manageable set, bound with durable paper cover sheets, and printed with suitable titles, dates and other identification on the cover. Upon completion of work, the "job site" As-built drawings shall be submitted for Engineer's review.

b. Equipment, Operation and Maintenance Manuals - Equipment data shall be organized into sets of manageable size. Bound in individual heavy-duty, 3-ring vinyl-covered binders, with pocket folders for folded sheet information, and marked with an identification on front and spine of each binder. Include the following information shall be included:

1. Copies of warranties (as applicable), subject to review and acceptable by Engineer.
2. Relevant Shop Drawings, subject to review and acceptance by Engineer [see (a) & (b) above].
3. Product Data (subject to review and acceptance by Engineer).

All manuals shall be submitted to Engineer for review.

Full compensation for As-built Drawings shall be considered as included in the various contract items paid, and no further compensation shall be allowed therefore.

C-65 SANITATION

In conformance with the most current Cal/OSHA regulations, the Contractor shall provide portable toilet and hand washing facilities with sufficient water flow for effective washing, a soap supply or cleansing agent, and a readily available supply of single use towels for each 20 employees or fraction thereof employed under this contract. The washing facilities shall be located reasonably close to the toilet facilities, and shall be maintained in a clean and sanitary condition at all times. When employees are working with hazardous substances, the Contractor shall provide hand washing and on-site shower facilities with hot, cold, or tepid running water as may be required by the most current Cal/OSHA regulations. It shall be the Contractors responsibility to determine, comply, and enforce the OHSA requirements. The Engineer may establish further sanitary and police rules and regulations for portable restroom facilities for all forces employed under this contract, and the Contractor shall be responsible for compliance therewith, and in the event of non-compliance, the Engineer may enforce them at the expense of the Contractor.

Full compensation for Sanitation shall be considered as included in the various contract items paid, and no separate payment will be made therefore.

C-66 INSPECTION

All materials furnished and work done under this contract will be subject to inspection. The Contractor shall notify the Engineer forty-eight (48) hours in advance of any work to be done, in order that inspection may be

provided. The Contractor shall inform the Engineer at least 72 hours in advance of the work as to the source of all materials proposed to be used in the work. Samples of materials shall be made available for testing as required by the Engineer, prior to starting work and during the course of the work. Work done in the absence of an inspector, without said written permission, shall be subject to rejection.

The Engineer shall have access at all times to all parts of the shop or plant where material under his or her inspection is being manufactured. When required, the Contractor shall notify the Engineer in sufficient time in advance of the manufacture or production of materials to be supplied under this contract, in order that the City may arrange for mill or factory inspection and testing of same. Any materials shipped by the Contractor from the factory prior to having satisfactorily passed such testing and inspection by the City's representative, or prior to the receipt of notice from said representative that said materials have satisfactorily passed such testing and inspection, or that such testing and inspection will not be required, shall not be used in the work.

The Contractor shall have no cause for claim against the City for delays involved in the testing of materials or the evaluation of such tests and no compensation will be made therefore.

C-67 DEFECTIVE WORK - NOTICE TO CONTRACTOR

If, in the opinion of the Engineer, work is not being done in accordance with the plans and specifications, written notice shall be given to the Contractor or its authorized agent. Written notice to any supervisors or agent in charge of any portion of the work in the absence of the Contractor, shall be considered as notice to the Contractor.

Work that is defective in its construction, or deficient in any of the requirements of these specifications, shall not be considered as accepted in the event of the failure of any employee of the City or inspector connected with the work, to point out said defects or deficiency during construction. The Contractor shall correct any imperfect work whenever discovered. If he or she refuses or neglects to replace defective work, it may be replaced by the City, after notice to the Contractor and his or her sureties, at the expense of the Contractor and the Contractor and his or her sureties shall be liable therefore.

C-68 EXISTING UTILITIES, IMPROVEMENTS AND OBSTRUCTIONS

Whenever any pole, structure, pipe, culvert, conduit, cable or other obstruction, either above or below ground surface within the area to be utilized by the Contractor in the performance of the work hereunder is, or may be affected by the Contractor's operations, the Contractor shall preserve the same intact, or he or she shall make arrangements with the Engineer of same for its protection, support, alteration or removal and reinstallation, as may be required by the conditions encountered.

The Contractor shall notify in advance and cooperate with each Engineer of poles, structures, pipes, culverts, conduits, cables, or other improvements which may be encountered or affected in any way by the work under this contract.

Where public utility mains or services are altered or removed and reinstalled either to avoid interference with the work under this contract or for the convenience of the Contractor, such alteration, removal and reinstallation shall be performed by the appropriate agency having jurisdiction thereof and the cost thereof shall be borne as specified in the following paragraphs provide.

Whenever feasible, the Contractor shall uncover sewer laterals, telephone and electric conduits, water mains and laterals and gas mains and laterals at least two hundred (200) feet in advance of trenching operations to permit grade changes should such changes be required.

Unless otherwise specifically provided in these contract documents, all costs of protecting, supporting, altering, removing and reinstalling pipes, structures, and other obstructions, shall be borne by the Contractor except:

(a) Where a City owned subsurface obstruction is encountered which is not shown on the contract drawings and not marked on the ground as an existing utility.

(b) Where it is necessary to remove or alter obstructions which are maintained under a City franchise, ordinance, contract, permit or other agreement by the terms which the obstruction is required to be moved or adjusted, or whatever, at the expense of the Engineer or person responsible therefore.

This provision shall not apply to cases where such facilities are altered or removed and reinstalled for the Contractor's convenience only.

Except as otherwise expressly provided herein, the Contractor shall not be entitled to any additional compensation due to the presence of, or interference, delays or expense caused by obstructions, or the removal and/or replacement of obstructions where such removal and/or replacement is required for proper completion of the work hereunder. The Contractor shall not be assessed liquidated damages for delay caused by City's failure to provide for removal or relocation of the utility facilities.

Where the work requires the removal of, or damage to, existing pavement, lawn, shrubbery, trees, hedges, gardens, drives, fences, buildings, or other improvements, the Contractor shall take precautions to limit said removal or damage to the least practicable amount and he or she shall at his or her own cost replace or restore said improvements to as near their original location and condition as is reasonably possible, except as otherwise provided. Great care shall be exercised in placing and compacting backfill in areas where improvements are to be placed upon said backfill.

C-69 ARBITRATION OF CLAIMS

All claims for $375,000 and less shall be arbitrated pursuant to the provisions of Public Contract Code Section 20104 et seq. unless the City has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of part 2 of the Public Contract Code.

C-70 SITE FACILITIES

If the Contractor desires to install a construction/security trailer on the construction site that will be utilized 24 hours a day, the following procedures must be met:

1. Contract must apply for a "Use Permit" and receive approval of the Planning Commission before installation of a security trailer on the construction site. Allow 3 to 8 weeks for processing the application.

2. Trailers must be located within a reasonable distance to portable or permanent bathroom facilities or be hooked up an approved sanitary system. A plumbing permit from the City Building Department shall be obtained prior to occupancy.

3. Trailer must be equipped with self-contained electrical power or be properly connected to an outside power source. An electrical permit shall be obtained prior to occupancy.

4. Security for Contractor's trailer shall be provided by the Contractor at the Contractor's expense.

C-71 CONTRACT TERMINATION

1. **Termination for Convenience or in the Public Interest:** The City may terminate this Contract in whole or in part at any time by written notice to the Contractor if the City determines that termination is in the best interests of the City or necessary to protect the public health safety, and welfare. If this Contract is so terminated, the Contractor shall be entitled to payment for all work performed and acceptable, and for all acceptable goods or services ordered by and delivered to the City prior to the date of termination, and to all reasonable costs of closing out the Contract, providing that the Contractor provides a final itemized invoice for the above amounts within thirty (30) working days after receiving termination notice. The Contractor shall be deemed to waive any rights to additional compensation for the costs of closing out the contract in the event it fails to provide an invoice within thirty (30) working day period.

2. **Option to Terminate - Time of the Essence:** Time is of the Essence for this contract. If the Contractor should fail to supply sufficient workers, materials, supplies, and equipment to achieve scheduled milestone(s) completion and project completion, the City shall give written notice to the Contractor, which notice shall require that the Contractor supply sufficient workers, materials, supplies, and equipment to diligently prosecute the project to completion as scheduled. If the Contractor fails to resume diligent prosecution of the work within 72 hours, after such notice is delivered, the City may issue the Contractor a Notice of Termination for default. The City may then eject the Contractor from the job, take over all supplies, equipment and material of the Contractor on the job site, and either obtain another contractor to finish the project or finish the project with its own forces. In such event, the Contractor shall be liable to the City for damages, including but not limited to, the full cost of completing the project.

3. **Contractor's Duties Upon Termination:** Immediately after receipt of a Notice of Termination, either for default or convenience, the Contractor shall:
   - Stop work under the Contract in whole or in part, to the extent specified in the Notice of Termination;
   - Place no further orders or subcontract for materials, services, or facilities, except as may be necessary for completion of such portion of the work under the Contract as is not terminated;
   - Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination.

C-72 PROGRESS PAYMENTS

On or about the 25th of the month, the Contractor and Engineer will mutually agree on the estimated value of work performed for the purpose of making progress payments. In the event that this estimate cannot be mutually agreed upon, the Engineer will determine the value for progress payment purposes.

Upon acceptance of the estimated quantities, the Contractor will submit an invoice to the City for processing. The Contractor's invoice shall be supported by a schedule of quantities, unit prices and extensions showing current, past and remaining balance to be paid. The City will process the payment request and mail payment within thirty (30) days from the date of receipt.

The estimated value of work performed on lump sum contracts or lump sum bid items will be determined from the Schedule of Values. The estimated value of work performed on a unit cost contract will be determined from the bid schedule of unit costs.

Quantities used in computing partial payments shall be considered as estimates only and shall be subject to revision in the following estimates. Work completed as estimates shall be an estimate only and no inaccuracy or error in said estimate shall operate to release the Contractor of any surety from damages rising from such work or the enforcement of each and every provision of this contract and the City shall have the right subsequently to correct any error made in any estimate for payment.

The City shall retain ten percent (10%) of such estimated value of the work completed, except that at any time after fifty percent (50%) of the work has been completed, if the Engineer finds that satisfactory progress is being made, the City may in its discretion reduce the total amount being retained from payment pursuant to the above requirement to five percent (5%) of the total estimated value of said work and may so reduce the amount retained from any of the remaining partial payments to five percent (5%) of the estimated value of such work.

The Engineer may at any time and at the Engineer's sole discretion, reinstate the retention at the full ten percent (10%) of the value of the work performed upon written notice to the Contractor.

Materials delivered but not incorporated or installed in the work will not be included in progress payments unless specified in the Special Provisions. The first progress payment will not be made until the following submittals have been provided and accepted:

1. List and Schedule of Submittals
2. Baseline Construction Schedule
3. Schedule of Values (if applicable)
4. Storm Water Pollution Prevention Plan

Subsequent payment requests will not be accepted unless accompanied by:

1. An updated Baseline Construction Schedule.
2. Certification that the Record Drawings have been updated as the date of the invoice.
3. Lien Releases
4. Certified Payroll Compliance

Upon completion of the work, the Engineer will make a proposed final estimate in writing of the total amount payable to the Contractor, including therein an itemization of said amount, segregated as to contract item quantities, extra work and any other basis for payment and shall also show therein all deductions made or to be made for prior payments and amounts to be kept or retained under the provisions of the contract. All prior estimates and payment shall be subject to correction in the proposed final estimate. Upon receipt of the final agreed to amount due and owing, the Contractor must submit a “final” invoice. Within thirty (30) days after the final invoice is submitted, the Contractor may submit an invoice for the amount of the “retention.” The City will pay retention to the Contractor within sixty (60) days from the date the Contractor completes all Punchlist items, unless the City has occupied the project or has beneficial use or enjoyment. In this case, the City will pay the retention within sixty (60) days of occupation or beneficial use or enjoyment. The City may withhold one hundred and fifty (150) percent of any disputed amount from the payment of retention.

C-73 SCHEDULE OF VALUES

Elements of work shall be separated into groupings appropriate for the project. The Technical Specifications may be used as a guide for establishing these groupings. Within each grouping, work shall be itemized by readily measurable quantities of work complete in place. Each activity in the schedule of values shall correlate to an activity in the construction schedule as described in Section C-29. Move-on costs, bond and insurance costs, overhead and profit shall not be allowed as line items but shall be prorated over other items of work. A line item to cover final inspection, Punchlist work, submittal of record drawings and other closeout activities shall be included. The Schedule of Values shall be broken down on the basis of each lump sum bid item. In the event that the Schedule of Values is not accepted by the Engineer, the Contractor shall revise the Schedule of Values in a manner that is acceptable to the Engineer. The Schedule of Values shall be submitted by the

Contractor within 14 days of Notice to Proceed.

The Schedule of Values analysis shall contain at least the following elements:

1. Item No. and description
2. Total item quantities and values.
3. To date item quantities and values.

C-74 ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

Pursuant to Public Contract Code Section 22300, for monies earned by the Contractor and withheld by the City of Milpitas to ensure the performance of the contract, the Contractor may, at its option, choose to substitute securities meeting the requirements of Section 22300. In the event that the Contractor wishes to choose this option, the Contractor shall enter into an escrow agreement with City, and the escrow agent, to be approved by the Engineer, in the form of the agreement included in these specifications. The costs of such escrow shall be paid by the Contractor. The securities to be deposited in the escrow account shall be equivalent, in fair market value, to the amount to be withheld as performance retention. The securities shall be held in accordance with the provisions of Public Contract Code Section 22300, and the escrow agreement.

Contractor shall have the obligation of ensuring that such securities deposited are sufficient so as to maintain, in total fair market value, an amount equal to the cash amount of the sums to be withheld under the Contract. If, upon written notice from the City of Milpitas' Director of Finance, or from the appropriate escrow agent, indicating that the fair market value of the securities has dropped below the dollar amount of monies to be withheld by the City to ensure performance, Contractor shall, within five days of the date of such notice, post additional securities as necessary to ensure that the total fair market value of all such securities held by the City, or in escrow, is equivalent to the amount of money to be withheld by the City under the Contract.

Any Contractor wishing to exercise this option shall give notice in writing to Engineer, and shall thereafter execute an escrow agreement in the form enclosed with these specifications.

The escrow agreement used hereunder shall be null, void, and unenforceable unless it is substantially similar to the following form:

ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into effective _____(date)_____by and between City of Milpitas whose address is 455 E Calaveras Blvd. Milpitas, CA 95035-5479 hereinafter called "Owner," _____ whose address is _____ _____ hereinafter called "Contractor" and _____
whose address is
_____ hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the Owner, Contractor, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by Owner pursuant to the Construction Contract entered into between the Owner and Contractor for _____ in the amount of _____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the Owner shall make payments of the retention earnings directly to the Escrow Agent. When the Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Owner within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the Owner and Contractor. Securities shall be held in the name of Owner and shall designate the Contractor as the beneficial owner.

(2) The Owner shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the Owner makes payment of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until the time that the escrow created under this contract is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Owner pays the Escrow Agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the Owner. These expenses and payment terms shall be determined by the Owner, Contractor, and Escrow Agent.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Owner.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the Owner to the Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The Owner shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days' written notice to the Escrow Agent from the owner of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Owner.

(8) Upon receipt of written notification from the Owner certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the Owner and the Contractor pursuant in Sections (5) to (8), inclusive, of this Agreement and the Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Owner and on behalf of the Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Owner:

City Manager
Title

Charles Lawson
Name

_____
Signature

_____
Address

On behalf of Contractor:

_____
Title

_____
Name

_____
Signature

_____
Address

On behalf of Escrow Agent:

_____
Title

_____
Name

_____
Signature

_____
Address

At the time the Escrow Account is opened, the Owner and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

Owner	Contractor
_____	_____
Title	Title
_____	_____
Name	Name
_____	_____
Signature	Signature

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C-75 LOSS OR DAMAGE

The Contractor shall be held responsible for, and be required to make good at his of her own expense, all damage to persons or property caused by himself, herself, or subcontractors, agents, or the employees of either of them during the progress of the work and until its final acceptance. Any property, including but not limited to existing structures, equipment, piping, pipe covering, grounds, sidewalks, curbs, gutters, driveways, fences, landscape, etc., damaged by the Contractor during the course of his or her work, shall be replaced or repaired by the Contractor in a manner satisfactory to the Engineer and at the Contractor's expense.

All loss or damage arising from any unforeseen difficulties which may be encountered in the prosecution of the work or from any action of the elements prior to the acceptance of the work or from any act or omission not authorized by these specifications on the part of the Contractor or any agent or person employed by him or her, shall be sustained by the Contractor.

The Contractor shall hold the City, its officers and employees, harmless from any loss arising out of injury to persons or damage to property resulting directly or indirectly from the performance of the work under this contract, including the defense of any action arising there from.

C-76 CLEANING UP

The Contractor shall remove from the vicinity of the completed work all plant, buildings, rubbish, unused materials, concrete forms, etc., used in or resulting from the construction operations, and shall leave the job site in a clean and neat condition **daily.** The Contractor shall provide an acceptable plan for preventing the generation of dust due to his or her operations in the construction zones along the haul routes, or equipment parking areas. This plan may consist of water sprinkling or an equivalent service. In the event the control of dust is not satisfactory to the City, the City shall take such measures as may be necessary to insure satisfactory dust control and deduct the cost of such measures from any payments due the Contractor. The Contractor shall abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary during all phases of construction including weekends, holidays and any other times as necessary.

Contractor shall provide a final clean-up of entire project site prior to scheduling the final walk-through for acceptance of the work.

Full compensation for Cleaning Up shall be considered as included in the various contract items paid and no additional compensation will be allowed therefore.

C-77 WARRANTIES

The Contractor shall be held responsible for and shall make good any defects through faulty or improper workmanship or through defective materials, arising or discovered, any part of this work for a period of one (1) year from the date of initial acceptance by the City Council, or time specified in the Special Provisions. The Performance Bond, furnished by the Contractor, shall cover such defects and protect the City against them during the period of warranty.

a. Warranty Form. Contractor warranties shall be on the Contractor's own letterhead, addressed to the Engineer, and shall in all cases be furnished to the Engineer in duplicate. In addition, furnish Engineer with original copies of all manufacturer's warranties.

b. Standard Product Warranties are pre-printed written warranties published by individual manufacturers for particular products and are specially endorsed by the manufacturer to the Engineer. Contractor shall provide to the Engineer the Manufacturer's Standard written warranties of all the equipment installed for the project.

c. Special Warranties are written warranties required by or incorporated in Contract Documents, to extend time limits provided by standard warranties or to provide greater rights for the Engineer. Special warranties for products and installations that are specified to be warranted shall be provided. When a special warranty is to be executed by the Contractor, or the Contractor and a Subcontractor, or the Contractor and a Supplier or Manufacturer, the Contractor shall prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Engineer, for approval, prior to final execution.

d. Disclaimers and Limitations. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor from providing the specified warranty on the work that incorporates the products. Nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor, from meeting specified warranty obligations.

e. Rejection of Warranties. The Engineer reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

The Engineer reserves the right to refuse to accept work where a special warranty, or similar commitment is required, until evidence is presented that entities required to countersign commitments are willing to do so.

f. Related Damages and Losses. When correcting warranted work that has failed, the Contractor shall remove and replace other work that has been damaged as a result of such failure, or that which must be removed and replaced to provide access for correction of the warranted work.

g. Reinstatement of Warranty. When work covered by a warranty has failed and been corrected, the warranty shall be reinstated by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for time.

h. Replacement Cost. On determination that work covered by a warranty has failed, the Contractor shall replace or rebuild the work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective work regardless of whether the City has benefited from use of the work through part of its useful service life.

i. Engineer's Recourse. Written warranties made to the Engineer are in addition to implied warranties, and shall not limit duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Engineer can enforce such other duties, obligations, rights or remedies.

j. Notice to Perform Warranty Work. The Contractor is required to repair or replace warranted work within 10 days of receiving written notice from the Engineer of a failure of warranted work. If the required repair or replacement work has not been performed by the Contractor within the time allowed, the Engineer may, at its sole discretion, undertake appropriate warranty work without further notice to the Contractor.

In the event that the nature of the failed warranted work is such that further damage will occur, or there is a danger to life or property, the Engineer may undertake immediate repair or replacement without notice to the Contractor.

The cost of repair work undertaken by the Engineer under these provisions shall be recoverable from the Contractor.

k. Submittal of Written Warranties. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders with thickness as necessary to accommodate contents, and sized to receive 8-1/2" x 11" paper.

Provide heavy paper dividers with celluloid covered tabs for each warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address and telephone number of the installer.

Identify each binder on the front and the spine with the typed or printed title "WARRANTIES," the project tile or name, and the name of the Contractor. Warranties are to be submitted to the Engineer for review.

C-78 PROJECT CLOSEOUT

a. Contractor's Request for Final Inspection. The Contractor shall request the Engineer, in writing, to conduct a final inspection when the Contractor considers the work is complete.

b. A Final Inspection will be scheduled within five (5) days and conducted by the Engineer, if the Engineer deems the work complete. If the Engineer does not accept that the contract work as complete, Engineer will decline to schedule a Final Inspection, and advise the Contractor the reason for not accepting the work as being complete.

c. When the Contractor again deems the work to be complete, a new written request shall be submitted.

d. The Engineer will schedule a Final Inspection within three (3) days or decline to schedule a Final Inspection in accordance with (b) above.

e. Steps (a) to (d) will be repeated until the Engineer accepts that the work is ready for a Final Inspection.

f. The Final Inspection will be conducted by the Engineer. As a result of the inspection, the Engineer will advise the Contractor of any work that must be completed or corrected before Acceptance, in the form of a Punchlist.

Separate reporting for actual recycling and disposal tonnage amount(s) and cost(s) are to be submitted to the Project Inspector.

The Project Inspector will forward recycling and disposal report to the Utility Engineer, Solid Waste Section, through the Engineer.

The Punchlist will be issued within five (5) days from date of the Final Inspection.

The Engineer will conduct a re-inspection of Punchlist upon written notice from the Contractor within three (3) days of such notice.

No extension of time will be allowed for:

1. The Engineer not accepting that the Contractor work is complete and declining to conduct a Final Inspection, and any subsequent additional time taken by the Contractor to complete the work ready for a Final Inspection.
2. Time taken by the Contractor to perform corrective work after the re-inspection or

repeat re-inspection.

Prerequisites for Acceptance:

1. Completion of Punchlist.
2. Submittal of final payment requests, with lien releases.
3. Submittal of As-Built Drawings.

C-79 CLAIMS

"Claim" means a separate demand by Contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, Contractor pursuant to the Contract and payment of which is not otherwise expressly provided for or that Contractor is not otherwise entitled to, or (C) an amount the payment of which is disputed by the City.

As a prerequisite to the making of a claim, Contractor must submit a Notice of Potential Claim in writing within 15 working days after Contractor learns of, or has the necessary information to have knowledge of, the event giving rise to the claim, including a determination by the City that a Change Request is unacceptable, in whole or in part.

Claims shall be in writing and include all documents necessary to substantiate the claim. Claim must be filed on or before the date of final payment. A claim must state in as much detail as possible the basis for the claim and the additional compensation or extra time to which Contractor believes it is entitled. If the claim is silent regarding a claim for extra time, Contractor shall be entitled to no extra time in connection with the claim. If the claim is silent regarding additional compensation, Contractor shall be entitled to no additional compensation in connection with the claim. Contractor must notify the City promptly in writing of any changes in its estimates of additional compensation or extra time, and the notification must state the reasons for the changes.

All claims and any amendments thereto shall also include the following certification, fully executed:

Project:
Contractor:
(name and address)
Construction Claim amount: $
Basis of Claim: attach claim details

_____(print full name), being the _____ (must be an officer) of _____ (Contractor), declare under penalty of perjury under the laws of the state of California, and do personally certify and attest that I have thoroughly reviewed the attached claim for additional compensation and/or extension of time, and know its contents, and said claim is made in good faith; the supporting data is truthful and accurate; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the owner is liable; and further, that I am familiar with California Penal Code Section 72 and California Government Code 12650, et seq, pertaining to false claims, and further know and understand that submission or certification of a false claim may lead to fines, imprisonment, and/or other severe legal consequences.

By: _____ Date: _____
(Signature)

The City shall respond in writing to Contractor's claim within 45 working days after the City's receipt of the

claim or may request in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the City may have against the Contractor.

The City's written response to the claim, as further documented, shall be submitted to Contractor within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.

If Contractor disputes the City's written response, or if the City fails to respond within the time prescribed, Contractor may so notify the City, in writing, either within 15 days of receipt of the City's response or within 15 days of the City's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the City shall schedule a meet and confer conference within 30 days for settlement of the dispute.

Following the meet and confer conference, if the claim or any portion remains in dispute, Contractor may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time Contractor submits its written claim pursuant to the above provisions until the time the claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

The above claims procedures do not apply to tort claims and are not intended nor shall be construed to change the time period for filing tort claims or actions.

The above claims procedures are either set forth in, or are consistent with, the provisions of Public Contract Code §§ 20104 and 20104.2.

Public Contract Code § 20104.4, set forth below, establishes the following procedures for all civil actions filed to resolve claims under this Contract:

(a) Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

(b) (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be

paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

(c) The court may, upon request by any party, order any witnesses to participate in the mediation of arbitration process.

The above claims procedures are also subject to Public Contract Code § 20104.6, which provides:

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

C-80 ACCEPTANCE

The acceptance of the work on behalf of the City shall be made by the City Council upon the recommendation of the head of the department under whose jurisdiction the work was performed and the approval of the City Manager. Such acceptance shall not constitute a waiver of warranty by the City. When the work has been accepted, there shall be paid to the Contractor a sum equal to the contract price less retention. The final ten (10) percent shall not become due and payable until a release of all claims against the City of Milpitas by virtue of this contract has been executed by the Contractor and until five (5) days shall have elapsed after the expiration of the period in which stop notices may be filed under the provisions of Civil Code Section 3179 et seq. of the State of California. The Notice of Completion shall be filed by the City following acceptance by the City Council.

SECTION D - SPECIAL CONDITIONS

D-01 NOTICE OF AWARD

The Contractor shall submit completed contract documents to the City within the time specified in Section B-09.

The Contractor shall be sent a Notice of Award from the City following the authorization to award the Contract by City Council. The Notice of Award will include the following:

A. A Cover Letter which schedules the Pre-Construction Meeting
B. Two (2) copies of the Contract and Bonds for execution
C. A Business License Application
D. A City of Milpitas Request for Taxpayer Identification Number Form
E. A Contractor's Information Form

The City and the Contractor recognize that time is of the essence for this Contract and that the City will suffer financial loss if the work is not started within the time specified after notice of award. The City reserves the right to annul the awarded contract per Section B-09, and just cause for forfeiture of the bid bond, if the Contractor does not complete and return to the City all of the following requirements within fourteen (14) working days of receipt of Notice of Award:

1. Submission of two (2) copies of the executed Contract.
2. Submission of two (2) copies of the Performance and Labor & Material Bonds, including Payment Bond Certificates specified in Sections B-10 and C-05 of the Contract Documents
3. Submission of completed Business License Application.
4. Submission of completed Request for Taxpayer Identification Number Form.
5. Submission of completed Contractor's Information Form.
6. Submission of the name, address, and telephone number for Company Safety Officer and the Company Safety Policy per CAL-OSHA Construction Safety Order 1509.
7. Submission of a Legal Document listing authorized personnel who can sign Contract Documents, including Contract Change Orders, on behalf of the Contractor.
8. Submission of two (2) copies of Insurance Certificates per these specifications.

D-01.1 PRIOR TO COMMENCEMENT OF WORK

The Contractor shall accomplish the following items prior to issuance of a Notice to Proceed:

1. Attend a Pre-Construction Conference.
2. Obtain approval of Contractor's Construction Schedule in accordance with Section C-29.
3. Submission of a completed Apprenticeship Standards Notification Form in accordance with Section C-10.
4. Obtain City acceptance of Contractor's Storm Water Pollution Prevention Plan in accordance with Section C-43, and Section E-05 Storm Water Pollution Prevention.
5. Approval of Contractor's Traffic Control Plan. The Plan shall be developed considering the plans and specifications (if applicable).
6. Written Report and Video recording of each of the structures to be demolished in accordance with Section E-10 Demolition, Salvage, and Abandonment.

Upon completion of the above requirements in Section D-01, the Engineer will issue to the Contractor, a Notice to Proceed which will establish the first working day of the Contract. However, the first working day will commence no later than 21 calendar days following the date of the Contractor's receipt of the Notice of Award letter.

The Contractor shall notify the Engineer of his or her intent to begin work at least 48 hours prior to beginning work by calling (408) 586-2884. Once work begins, notification must be made only if work is delayed or suspended.

D-01.2 PROSECUTION AND COMPLETION

The Contractor shall diligently prosecute the work to completion, including the corrective Punchlist items, for all Base Bid items of work before the expiration of 90 Calendar Days. Refer to Section A, Bid Schedule, regarding increases to Contract Time for Add Alternate Bid Items if accepted by the City.

Contractor shall submit a schedule of work to the Engineer that includes dates for the milestone tasks below and is in accordance with Section C-29. Schedule may include work on weekends or holidays as needed, and work days longer than 8 hours. Contractor is responsible for implementing measures as needed to allow for work to proceed during wet weather, should wet weather occur.

- Removal of non-adhering lead paint
- Removal of asbestos-containing materials
- Demolition of walls, materials/structures
- Offsite disposal of disposal items, incl. hazardous materials
- Finish grading
- Project closeout

Prior to commencement of construction work, a Pre-Construction Conference will be conducted at a location designated in the Notice of Award letter, for the purpose of discussing with the Contractor, but not limited to, the scope of work, Contract Drawings, Specifications, existing conditions, materials to be ordered, equipment to be used, and all essential matters pertaining to the prosecution and satisfactory completion of the project as required. The Contractor's representatives at this conference shall include all personnel involved in the project, specifically the Project Manager, Project Superintendent, all major subcontractors.

The Contractor shall at all times during the continuance of the contract, prosecute the work with such forces and equipment as in the opinion of the Engineer, are sufficient to complete the different portions of the work in the order required and within the specified time and to secure a satisfactory quality of work.

In the event any delay is caused the Contractor by strikes or other causes beyond his or her control, or by specific orders of the Engineer to stop work, or by performance of changes or extra work ordered by the Engineer, or by failure of the City to provide material when and if provided for in the specifications, or necessary rights of way or site for installation, such delay may be cause for the granting of an extension of time for a period equivalent to the delay. The current controlling operation or operations is to be construed to include any feature of work considered at the time by the Engineer and the Contractor, which, if delayed, will delay the time of completion of the contract.

D-02 LIQUIDATED DAMAGES

It is agreed by the parties to the contract that failure to complete the work or any part thereof in the time agreed upon in the contract, or within such extra time as may have been allowed for delays or extensions granted as provided in the contract, will cause damage to the City of Milpitas and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which the City will sustain in the event of and by reason of such delay, and it is therefore agreed that the Contractor will pay to the City of Milpitas the sum of $500 for everyday including Saturdays, Sundays and holidays that the contract remains uncompleted after the date required for completion, including all Punchlist items, and it is agreed that said amounts will be deducted from any money due the Contractor under his or her contract and the Contractor and his or her sureties shall be liable for any excess.

D-03 SUBMITTALS:

The list of submittals shall include, but not be limited to the following:

ITEM DESCRIPTION	*Refer to Section:*	*TIME FOR CITY REVIEW (WORKING DAYS)*
1. Project Schedule and progress schedules	C-22 , C-29, D-01	10
2. Traffic Control Plan	C-22 , D-01, E-04	10
3. SWPPP	C22, C43 , D-01, E-05	10
4. City Demolition Permit Checklist	C-22 & E-10	10
5. Schedule of Values	C-22, C73	10
6. Temporary Facilities	C-22 & E-06	10
7. Written report and video recording of the preconstruction condition of existing facilities and structures to remain	E-10, C-22	10
8. Groundwater & Surface Water Control Plan	C-22 & E-08	10
9. Demolition & Salvage Plan	C-22 & E-10	10
10. Earthwork Test Results, Certifications and Materials Source	C-22 & E-11	10
11. Not used		
12. Chain Link Fence	C-22 & E-12	10
13. Asbestos Abatement Submittals	C-22 & E-13	10
14. Lead In Place Management/Abatement Submittals	C-22 & E-14	10
15. Permits and Waste Disposal Plan for Hazardous Materials	C-22 & E-15	10

SECTION E – TECHNICAL PROVISIONS

E-01 BASIC REQUIREMENTS AND SUMMARY OF WORK AND BID ALTERNATES

General

Work Covered by Contract Documents

The Work to be performed under this Contract shall consist of furnishing all tools, equipment, labor, materials, supplies, notifications, permits, and manufactured articles, and furnishing all shipping and transportation and services, and performing all work or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The Work shall be complete and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper operation of the equipment shall be provided by the Contractor as though originally so indicated at no increase in cost to the City.

Work includes all appurtenant work for the complete demolition of the facilities and construction of site improvements as shown on the Plans entitled " **North Main Street Development Project**, **Blacksmith Shop and Residence Demolition, 116 and 86 N. Main Street Sites"** and other items of work that are required by the Contract Documents, City of Milpitas Standard Specifications, and these specifications. In case of conflict, see Section C-16, Document Precedence.

Summary of Work and Project Description

The project site is located in the City of Milpitas. It is surrounded by light industrial and residential units. The project site contains abandoned facilities and out building structures. In general, the Work to be done consists of permitting, lead-based paint and asbestos removal, utility removal & capping, salvage, demolition and removal of abandoned facilities, foundations, pipes, equipment, mechanical, electrical, above ground structures, hazardous materials disposal. These facilities include, but are not limited to, shops, residence, sheds and other structures, asphalt, concrete slabs, old fence, light poles and posts and utilities features, and miscellaneous debris and equipment. The site will be rendered a cleared open lot, with a smooth graded surface for positive drainage and with a new security fence (front) and erosion control features. Structures to be demolished may contain such items and equipment as paint cans, miscellaneous containers, debris, steel safe, electrical fixtures, plumbing fixtures and other mechanical equipment. Additional work includes grading, site fencing, and gates. There are hazardous materials on the site, including but not limited to lead-based paint, asbestos, and containers of solvents and oils. Contractor shall comply with all local, state, federal and agency requirements for safety and disposal and for execution of the work. The proposed work areas are more fully identified in the plans and in other portions of these specifications.

Work Constraints

Hazardous materials are present on the project site and require special handling procedures as noted in the bid documents.

The blacksmith shop water tower, branding boards and doors are to have lead-based paint removed and be salvaged without damage.

Private property exists on the south side of the project site. No access is permitted unless explicitly identified as access easement areas.

Strong, effective dust control and air quality protection measures are critical throughout this project and will be vigorously enforced.

Other constraints that affect the work are noted elsewhere in the bid documents.

Measurement and Payment

The Work to be performed under this Contract shall be measured on a Lump Sum Basis.

The Contract Lump Sum price for the Work to be performed under this Contract shall include full compensation for furnishing all labor and materials, including tools, equipment, disposal costs, mobilization, traffic control, permits, storm water pollution control, salvage, demolition, disposal and abatement of Hazardous Materials, earthwork, and disposal, utility modifications, temporary facilities, abandonment and utility plugging, site preparation, and incidentals for performing the Work under this Contract complete in place as specified in these Technical Provisions and as directed by the Engineer.

END OF SECTION

E-02 MAINTENANCE OF ACCESS AND PUBLIC COORDINATION

Maintenance of Access

Vehicular traffic shall be maintained at all times to Main Street. Contractor shall maintain city's access to the site. Safe pedestrian access shall be provided and maintained along sidewalks by the contractor.

Advance Public Notification

The Contractor shall contact the following parties listed below five working days prior, 48-hours and 10-days prior to planned construction activities.

No	Agency	Telephone Number
1	Milpitas Police Department	(408) 586-2400
2	Milpitas Fire Department	(408) 586-2800
3	Bay Area Air Quality Management District	(415) 749 4762

The Contractor shall provide the City with written proof of notification of the parties listed above by listing all parties contacted, the names of those contacted, and the dates the contacts where made.

Notice shall be given for general construction activity in an area as well as specific activities which will, in any way, inconvenience the nearby property owners, tenants or lessees or affect their operations or access to their property. In addition, the contractor shall notify the cities consulting archeologist prior to demolition.

Traffic control shall be coordinated for the minimum inconvenience and maximum safety of the public during the construction period. The Contractor shall bear full responsibility for maintaining traffic control during the construction period. Contractor shall maintain traffic circulation at all times during the project. "No Parking" signs shall be posted 48 hours prior to start of work, see Section E-04, "Traffic Control," for additional requirements.

Failure to comply with the above notification requirements could result in cancellation by the Engineer, of the day's work. No extension of time or additional cost will be granted for delays to the Contractor caused by any work cancellations.

Measurement and Payment

All costs required for Maintenance of Access and Public Coordination shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-03 MOBILIZATION

General

Mobilization shall conform to the applicable provisions in Section 11, "Mobilization" of the State Standard Specifications.

Measurement and Payment

All costs required for Mobilization shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-04 TRAFFIC CONTROL

General

Traffic Control shall include all work, equipment, and materials necessary to provide no parking signs, towing, construction signage, flaggers and all other necessary items to provide a safe work site and site access.

The Contractor shall submit all haul routes for approval by the City, and by the California Department of Transportation if on State highways.

The Contractor shall comply with Section 7-1.08, "Public Convenience"' and 7-1.09, "Public Safety", of the State Standard Specifications, and Section C-39 "Lane Closure Restrictions", C-40 "Public Convenience and Safety", and C-41 "Safety" of these Contract Documents, as applicable.

Submittals

Make submittals in accordance with Section C-22. Contractor to submit traffic control plan for all haul routes.

Public Convenience and Safety

The Contractor shall comply with Section 7-1.08, "Public Convenience"' and 7-1.09, "Public Safety", of the State Standard Specifications.

Procedures

Construction Area Traffic Control Devices

The Contractor shall comply with flagging and traffic handling equipment and device requirements of Section 12, "Construction Area Traffic Control Devices", of the State Standard Specifications with the exception of Section 12-2.02, "Flagging Costs". Full compensation for flagging costs shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore. Flaggers and all personnel working near traffic shall wear orange/red vests or shirts. Flaggers shall guide traffic with an appropriate stop/slow sign.

A traffic control plan shall be submitted by the Contractor to the Engineer a minimum of five (5) working days prior to any work commencing on the project. The traffic control plan shall be reviewed and accepted by the Engineer prior to any work commencing on the project. All traffic plans shall be prepared in accordance with the latest version of the State of California Department of Transportation "Manual of Traffic Controls for Maintenance and Construction Work Zones." The traffic control plan shall consist of scaled drawings of each street where work is proposed. The plan shall detail all traffic control measures proposed for each street. Copies or modified copies of the Manual of Traffic Controls for Maintenance and Construction Work Zones or the Work Area Traffic Control Handbook or any other type of copied standardized traffic control plans shall not be acceptable.

The Contractor shall keep a minimum of one 11-foot wide lane of traffic open in each direction during working hours. Attention is directed to Section C-39, "Lane Closure Restrictions," of these specifications. The Contractor shall provide radio-equipped flag persons during all one-lane operations. Flag persons shall be properly equipped and trained in accordance with "Instructions to Flagmen", published by the California Department of Transportation.

The provisions of Section 7-1.08 of the State Standard Specifications regarding State-Furnished signs are hereby revised to provide that all signs and other warning devices shall be provided by the Contractor and shall become the Contractor's property after completion of the contract. The Contractor shall refer to the current "Manual of Warning Signs, Lights and Devices for use in the Performance of Work Upon Highways" and the "Uniform Sign Chart" issued by the Department of Transportation, Division of Operations.

The Contractor shall not block any driveway or access to adjacent property owners at any time. The Contractor shall place at the beginning of the project period, and maintain throughout the contract, one C18 "Road Construction Ahead" sign on each approach to the work areas. The signs shall be 48 inches X 48 inches, mounted on a wood post and shall have reflectorized sheeting on aluminum or plywood backing.

Whenever the Contractor's operations create a condition potentially hazardous to the public or traffic, he shall furnish at his own expense such flaggers, guards, and other devices necessary to provide adequate warning to the public of any dangerous conditions to be encountered. Contractor shall furnish, erect and maintain such fences, barricades, lights, signs, and other devices necessary to prevent accidents and avoid damage or injury to the public.

If the Contractor fails to provide, is neglectful of or negligent in furnishing and maintaining warning and protective facilities and personnel as herein provided within eight (8) hours of being notified by the Engineer of the need for such, the City may furnish and maintain such facilities and personnel. In this event, the City may charge the Contractor therefore by deducting the cost of such facilities and personnel from progress payments due to the Contractor as such costs are incurred by the City.

Those parts of public streets, rights-of-way, and sidewalks occupied by the Contractor shall be immediately vacated and returned to public use when the use thereof is no longer necessary for the construction work. No overnight parking of construction vehicles and equipment or stockpiling of materials will be allowed on streets or sidewalks. All vehicles, equipment, and materials must be removed from the street and right-of-way by the end of each working day.

No Parking Signs/Towing

The contractor shall provide "No Parking" signs with day of the week and work hours written out or properly abbreviated with 3 or 4 letters; the month shall be written out or properly abbreviated with 3 or 4 letters; date or dates of restriction shall be listed completely; the beginning and ending times shall be clearly listed on the sign.

Signs shall be mounted such that the words, "No Parking" are at an elevation at least 3 feet and not more than 7 feet above the adjacent flow line. Signs may be tied with string to trees and power poles, taped to existing sign poles, or mounted to stakes or barricades as provided by the Contractor. The signs shall be placed as needed to control the parking of cars within the construction zone and shall be placed at a maximum spacing of sixty (60) feet.

Signs shall be posted and maintained by the Contractor for a period of 72 hours prior to the restrictions becoming effective. The Contractor shall promptly reset or replace all damaged and defective signs. Upon completion of work in each area, all signs, stakes, and barricades shall be promptly and completely removed by the Contractor.

The Contractor shall be fully responsible for adequate removal of all parked cars. All vehicle removal shall be coordinated by the Contractor with the Police Department. The Contractor shall notify the Police traffic sergeant upon posting of the parking restrictions for a particular street and when the signs are removed. For removal of parked vehicles, the Contractor shall notify the Police traffic sergeant not less than 2 hours prior to the needed removal with the address nearest the parked vehicle, make, model, color, and license number. The City shall not be responsible for any delay or additional cost associated with the removal of parked cars which obstruct the construction operation.

If a vehicle owner successfully contests a towing citation in court, and their citation is dismissed for causes related to the Contractor's failure to perform the requirements of this section, the Contractor shall reimburse the City for the cost of any claims associated with the towing citation.

Measurement and Payment

All costs required for Traffic Control shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-05 STORM WATER POLLUTION PREVENTION

General

Scope

Discharge of pollutants (any substance, material, or waste other than clear, uncontaminated storm water) from the project into the storm drain system is strictly prohibited by the San Francisco Bay Regional Water Quality Control Board's (RWQCB) Water Quality Control Plan (Basin Plan).

Provide all material, labor, equipment for installation, implementation, and maintenance of all surface-water pollution prevention measures. This work includes the following:

1. Preparing and implementing a site specific Storm Water Pollution Prevention Plan (SWPPP) and obtain coverage under the State Water Resources Control Board, NPDES General Permit (construction storm water permit), including Notice of Intent.
2. Furnishing, placing, and installing effective measures for preventing runoff of soil, silts, gravel, hazardous chemicals or other materials prohibited by the San Francisco Bay RWQCB from entering the storm water drainage system.
3. Management of on-site construction materials in such a manner as to prevent said materials from contacting storm water or wash water and running off into the storm drain system.
4. Complying with applicable standards and regulations specified herein.
5. Maintain three copies of the most current revised SWPPP plan. Two copies to be forwarded to the Engineer and one shall be maintained at the Contractor's work site.
6. Review any changes in the SWPPP plan at the weekly progress meetings. The Contractor shall submit a numbered checklist of the current status of each prevention measure on the job site.
7. Preparing the Notice of Termination (NOT)

In this section, the term "storm drain system" shall include storm water conduits, storm drain inlets and other storm drain structures, street gutters, channels, and ditches.

Sanitary sewer discharge regulations are intended to provide protection of the sanitary sewer system. In this section, "sanitary sewer" shall include any sanitary sewer manhole, clean out, sewer laterals, or other connection to the Waste Water Treatment Plant.

Contractor shall have storm water pollution prevention measures in place and conduct inspections year-round. It is the responsibility of the Contractor to be prepared for a rain event in the non-rainy season, and to be aware of weather predictions. The City is not responsible for informing the Contractor of rain predictions.

Sanitary sewer blockages can result in a back-up and discharge to the storm drain system. Contractor shall immediately notify the Engineer if they become aware of a clogged sanitary sewer associated with the project.

Contractor shall not allow any non-storm water from the project to enter the storm drain system. Examples of non-storm water include water used for dust suppression, pipe flushing and testing, and domestic supply water used to wash streets, painting and drywall equipment, vehicles, or other uses.

Water resulting from de-watering may be discharged to a storm drain only if it is free of pollutants, including sediment. Contractor shall use methods such as a settling basin or filter to ensure that dewatering discharges are free of pollutants. Water shall be tested at Contractor's expense as specified in Section C-44.

Regulations and Standards

Contractor shall comply with the following applicable regulations:

1. Clean Water Act, United States Environmental Protection Agency, and Porter Cologne Clean Water Act, State of California.
2. San Francisco Bay (Region 2) Water Quality Control Plan (Basin Plan), California Regional Water Quality Control Board, 1998 Edition.
3. Waste Discharge Requirements Order No. 99-08 DWQ (National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002) and Resolution No. 2001-046, Modification of Water Quality Order 99-08, State of Water Resources Control Boare. These orders are referred to as the General Permit.
4. Section C-43 of these Specifications.

Contractor shall comply with the following standards and guidelines on storm drain pollution prevention:

Manual of Standards of Erosion and Sediment Control, Association of Bay Area Governments (ABAG). This document can be order from:

ABAG
P.O. Box 2050
Oakland, CA 94604
(510) 464-7900

Erosion and Sediment Control Field Manual California Regional Water Quality Control Board-San Francisco Bay Region, Third Edition, July 1999. This document can be order from:

San Francisco Estuary Project
1515 Clay Street, Suite 1400
Oakland, CA 94612
(510) 622-2465

Other documents that affect the selection and implementation of storm water pollution prevention measures include the Mitigated Negative Declaration of environmental impact for this project adopted June 2004 and the mitigation measures noted in the associated Mitigation Monitoring and Reporting Program (see Appendix B, note Mitigation Measure 1)

Submittals

Submittals shall comply with requirements specified in Section C-22, Submittal.

Storm Water Pollution Prevention Plan (SWPPP) shall be submitted to the Engineer within 10 calendar days of issuance of a Notice of Award letter. Refer to Section D-01 regarding issuance of the Notice To Proceed. The SWPPP must contain all required elements specified in the General Permit. The SWPPP shall be developed and revised as necessary to meet the following objectives:

1. To identify pollutant sources that may affect the quality of storm water discharges associated with construction activity from the construction site.
2. To identify non-storm water discharges.
3. To identify, construct, and implement storm water pollution prevention measures (Best Management Practices, or BMPs) to reduce or eliminate pollutants in storm water discharges from the construction site, both during construction and after construction is completed.
4. Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).

5. Contractor shall amend the SWPPP whenever there is a change in construction or operations that may affect the discharge of pollutants to surface waters. All amendments should be dated and directly attached to the SWPPP.
6. The plan will include a site map and site-specific written plan that describes pollution sources for the construction activity and the methods that will be used for erosion and sediment control, hazardous materials management, and any other construction activity that are sources of storm drain system pollution.

Products

Material

General: Provide materials as required for execution of the work.

Execution

General

The Contractor will write and implement a SWPPP that includes a site map and written description of pollution prevention methods. The intent of this requirement is to ensure Contractor compliance with applicable regulations for the discharge of storm water from the project. The Contractor will choose the best available performance-based technology and methods to prevent storm water pollution for construction site activity. The method (s) chosen shall be appropriate for each specific site condition.

SWPPP Topics

Following are topics the Contractor shall address in the SWPPP:

Contractor Certification:

In compliance with the General Permit, the SWPPP must have the following signed certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Introduction/Site Description:

The SWPPP shall include basic information about the project including: site of site, type of construction, location of site, project start date and estimated completion date.

Maps:

The General Permit has specific map requirements, including a topographic map showing the location of nearby surface water bodies and the discharge location(s) for the site. A detailed site map is also required, which shall identify areas of soil disturbance, location of surface water bodies, areas of existing surface vegetation, location of sediment or pollutant control measures, site drainage patterns, areas used for storage of soils, waste, or materials, vehicle and equipment parking, or service areas, existing paved areas, and location of post-construction controls. The maps shall be updated as needed to reflect changes as the project progresses. The approved map and plan shall be kept onsite for reference by the Contractor and the City.

Description of Site and Soil Types:

Include the following estimates:

The size of the construction site (in acres);

The runoff coefficient of the site before and after construction;

The percentage of the area of construction that is impervious before and after construction.

Above quantities are required information that the City must submit to the RWQCB for every construction project.

Pollutant Sources:

List and describe pollutants that are likely to be present in storm water discharges from the site, such as sediment, waste materials, concrete, etc. Describe the locations of storage or use of such materials and the measures to prevent pollution.

Toxic Materials:

Describe all toxic materials that will be used during construction, such as adhesives, paint, petroleum products, pesticides and vehicle fluids. Describe the locations of storage or use of such materials and the measures to prevent pollution.

Erosion and Sediment Control:

Provide a description of erosion and sediment control measures that will be used on the site, and correlate the description with the site amp. Areas requiring erosion control measures are exposed soil, such as soil piles, bare soil, sloped soil, and any area of disturbed soil. Erosion control measures include paving, tarp placement, soil blankets, mulching, seeding, hydro-mulching, and spreading straw. Sediment control measures include drain inlet protection, filter fabric, geo-textile silt fencing, gravel placement, gravel or sand bag placement, and straw wattle placement. This list is not all inclusive and the Contractor should refer to the resources listed in this section to identify the best measures for the project. Describe measures to reduce the tracking of sediment from the site. Describe waste disposal practices and methods to prevent waste materials from polluting storm water. Indicate the location of concrete washout areas. Both erosion and sediment control practices are designed to be implemented as an integrated system of pollution control. Without erosion controls, sediment controls are easily overwhelmed and will not prevent pollution.

Non-Storm Water Management:

Describe all non-storm water discharges that may occur on site. Examples of non-storm water discharges include irrigation runoff, street cleaning, spills, or leakage from storage tanks. Non-storm water discharges should be eliminated or reduced to the extent feasible. Discharges from dewatering are allowed only if they are free of pollutants, including sediment.

Maintenance, Inspection, and Repair of Controls:

Structural pollution controls require ongoing inspection, maintenance and repair. Contractor shall maintain all pollution control measures to achieve compliance with the SWPPP and General Permit. Describe procedures for responding to failure of any structural controls and indicate the persons responsible for inspection, maintenance, and repair.

Spill Prevention and Control:

Measures to prevent, control and respond to spills shall be described in the SWPPP. Contractor shall take precautions to prevent accidental spills of pollutants, including hazardous materials brought onsite by the Contractor. However, in the event of a spill, the Contractor shall be responsible for the following:

Immediately contain and prevent leaks and spills of prohibited pollutants from entering the storm drain system. Clean up the spill and label the contained materials. Store the container in a

safe place and contact the Engineer prior to disposal of the waste by the Contractor. Contractor shall keep a spill kit on site at all times for this purpose.

Contractor shall comply with all federal, state, and local hazardous waste requirements. Ensure that no spilled materials are washed into the streets, gutters, storm drains, or creeks.

Report any hazardous or unknown material spills immediately to the City of Milpitas.

Post-Construction Storm Water Management:

Describe all the control practices to reduce pollutants in storm water discharges after the construction activities are completed at the site. Post-construction BMPs include: minimizing land disturbances, minimizing impervious surfaces, treatment of storm water runoff using filtration, use of efficient irrigation systems, and planting to reduce erodable surfaces.

Personnel:

Identify and describe the training of the personnel responsible for the implementation and monitoring of the SWPPP and BMPs. These activities must be performed by trained, competent personnel. Documentation of training shall be available upon request of the Engineer or a regulatory agency.

Notification List:

Provide the company's name, address and telephone number, along with a contact person's name and telephone number for everyone responsible for implementation of the SWPPP. The Contractor shall inform all subcontractors (if any) of the water pollution prevention requirements contained in this specification and the site-specific SWPPP and include appropriate subcontract provisions to ensure that these requirements are met.

Monitoring and Reporting:

The SWPPP shall describe the monitoring program to ensure compliance with the General Permit. The monitoring plan shall include site inspections and the contractor shall conduct inspections of the construction site weekly, prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. The name(s) and contact number(s) of the assigned inspection personnel shall be listed in the SWPPP. Weekly and pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that the BMPs have functioned adequately. During extended storm events, inspections shall be required each 24-hour period. BMPs shall be evaluated for adequacy and proper implementation and whether additional BMPs are required in accordance with the terms of the General Permit. The Contractor shall submit a copy of all inspection reports to the Engineer for review.

Inspections must be documented and the records maintained onsite for review by the Engineer or regulatory agency. If instances of non-compliance with the General Permit are identified, the Contractor shall notify the Engineer immediately. Corrective measures should be implemented immediately following discovery of an exceedance of water quality standards or other instance of non-compliance.

Environmental Enforcement

The San Francisco Bay RWQCB has authority to enforce, through codified regulations, any portions of this Section that may violate applicable regulations. Agency enforcement may include but is not limited to: Citations, orders to abate, bills for cleanup costs and administration, civil suits, and/or criminal charges. Contract compliance action by the City shall not be construed to void or suspend any enforcement actions by these or other regulatory agencies.

Contractor shall notify the Engineer within 24 hours after issuance of any citation(s) issued by any regulatory agency and shall be responsible for all fines and costs necessary to correct the conditions listed in the citation(s) to include all legal fees and City expenses.

Measurement and Payment

All costs required for Storm Water Pollution Prevention shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-06 TEMPORARY FACILITIES AND UTILITIES

General

Description of Work

This section covers the general requirements for the Contractor's temporary facilities at the job site and for the prosecution of the work.

Submittals

Make submittals in accordance with Section C-22.

Contractor to submit a proposed layout of all temporary offices and storage yard.

Execution

Contractor's Plant and Equipment

Contractor's Staging and Work Areas

The Contractor shall submit to the Engineer for review a proposed plan and layout for all temporary offices and storage yards. Contractor shall provide gravel surfacing as required for erosion and dust control in storage yard and office area.

Security

The Contractor shall at all times be responsible for the security of his/her plant and equipment. The City will not take any responsibility for missing or damaged equipment, tools or personal belongings. As a minimum, provide temporary fencing around the work areas.

Workshop and Storage Facilities

The Contractor shall provide storage buildings as needed for the protection of equipment, materials, supplies and tools, and shall insure that the building used for the storage of materials which deteriorate when exposed to moisture is moisture-proof. Workshops and storage buildings shall be located as designated by the Engineer, and shall be clean and in proper order at all times.

Contractor's Utilities

For all services, the Contractor shall be responsible for providing all labor and materials required for making the service connection and running pipe, conduit, cable, pumps and other items as needed from the connection point to the location he/she needs service. Installation must meet City standards. No asphalt cutting and patching is allowed. Contractor shall submit schematic plan and details of proposed service connection and routing for review and acceptance prior to ordering materials.

Lands Provided by City

The City will provide access to, and the use of, all property required for the work under the contract, together with the right of access to such lands, as indicated. The Contractor shall not unreasonably encumber the premises with his/her materials, equipment or activities.

Contractor shall provide gravel surfacing, as required for all-weather vehicular access, erosion and dust control in the Temporary Construction Easements. The area shall be restored to its original condition at the completion of construction to the satisfaction of the Engineer and the Owner, at contractor's expense. Contractor shall

comply with requirements of the Temporary Construction Easement document covering the easement area (see Information Available to Bidders).

Lands Provided by Contractor

The Contractor shall provide with no liability to the City any additional land and access thereto not shown or described that may be required for temporary construction facilities or storage of materials. He/she shall construct all access roads, detour roads or other temporary works as required by his/her operations. The Contractor shall confine his/her equipment, storage of materials and operation of his/her workmen to those areas shown and described and such additional areas as he/she may provide.

Before using any land outside the site boundary, the Contractor shall obtain written approval from the landowner and submit it "for information" to the Engineer. At the end of the project, the Contractor shall obtain a signed liability release from each landowner whose land he/she used and submit it to the Engineer. Retention will not be released until these signed releases are submitted.

Preservation, Restoration, and Cleanup

Site Restoration and Cleanup

At all times during the work, keep the premises clean and orderly, and upon completion of the work, repair all damage caused by equipment to the satisfaction of the Engineer and leave the project free of rubbish or excess materials of any kind. Cleanup of the premises shall be accomplished in a timely manner. Should the City be required to cleanup the premises due to failure of the Contractor to accomplish such cleanup in a timely manner, the Contractor shall reimburse the City for all costs incurred.

Stockpile excavated materials in a manner that will cause the least damage to adjacent improvements, or fences, regardless of whether these are on private property, or on state, county, district or city rights-of-way. Remove all excavated materials and leave these surfaces in a condition equivalent to their original condition. Replace topsoil areas, raked and graded to conform to their original contours.

All existing drainage ditches and culverts shall be reopened and graded and natural drainage restored. Restore culverts broken or damaged to their original condition and location.

Temporary construction access easement at north end of site shall be restored to its original condition. Permanent easement at the south end of the site shall be restored to its original condition. If any asphalt or other feature is damaged, it shall be repaired or replace to the satisfaction of the Engineer. No stockpiling, storage, staging or other construction activities may occur on either easement area. The easement areas shall be used solely for access purposes.

Measurement and Payment

All costs required for Temporary Facilities and Utilities shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-07 PROJECT APPEARANCE, EXISTING TREES, SWEEPING AND DUST

The Contractor shall maintain a neat appearance at the work site. Debris developed during construction shall be disposed of concurrently with its generation. Stockpiling of debris during construction shall not be allowed unless otherwise approved by the Engineer.

Existing Trees

Attention is directed to Section 7-1.11, "Preservation of property" of the State Standard Specifications.

Should the project include work on streets with mature trees adjacent to the roadway, in some locations the canopy of the trees may extend over the roadway. It is the responsibility of the contractor to conduct construction operations around said tree canopies such that the work is accomplished without damaging or injuring trees or tree limbs in any way. The contractor may trim said trees in order to facilitate construction operations so long as the contractor possesses a C-27 and a C-61 license. Any tree trimming must be approved by the Engineer at least two working days prior to the planned work operation. In addition, adjacent residents must be notified at least two (2) working days in advance of any tree trimming.

When required by the Engineer, tree pruning shall be performed by a Certified Arborist and in accordance with "Pruning Standards," published by the Western Chapter of the International Society of Arboriculture. The arborist can be a person in employment of the contractor as long as the person possesses a C-27 and a C-61 license or has been certified by the Western Chapter of the International Society of Arboriculture. The Certified Arborist shall be approved in advance by the Engineer, and all pruning shall be done in the presence of the Engineer.

Sweeping

Streets shall be swept daily and immediately following all grading, paving, off-haul operations and all trucking operations. The Contractor shall sweep the street with a power pick-up broom. The Contractor shall keep a power sweeper on the job at all times and it shall be used to keep the streets free of loose or tracked material from the Contractor's operation.

Dust Control

Water all active construction areas at least twice daily or as needed. Cover all trucks hauling soil sand and other loose materials or maintain at least two feet of freeboard. Pave, apply water three times daily or as needed or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas. Apply non-toxic soil stabilizers to previously graded areas inactive for ten days or more. Enclose, cover, water twice daily or apply non-toxic soil stabilizers to exposed stockpiles. Limit traffic speeds on unpaved roads to 15 mph. Effective dust control measures are to be in force at all times throughout the project. Additional requirements relating to dust control are noted elsewhere in the contract documents.

Litter and Airborne Debris Control

Litter is any waste material not in an excavation, in a truck, or placed in a designated disposal area. Remove litter from roads traveled by trucks carrying waste materials at the end of the work day, and more frequently if required. Keep the work site clean of litter, including worker meal debris, throughout construction. Worker food and/or beverage debris will not be tolerated.

Contractor is to note that windy conditions frequently exist at the project site. Every effort shall be made to prevent wind-blown debris from exiting the project site. Any debris which is generated by Contractor's operations and is blown or otherwise carried off the site shall be immediately retrieved and disposed of in a safe and legal manner. Particular care shall be taken to prevent debris or any foreign material from entering the Coyote Creek corridor.

Measurement and Payment

All costs required for Project appearance, Existing Trees, Sweeping and Dust shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-08 CONTROL OF GROUNDWATER, SURFACE WATER, AND EXCAVATION DRAINAGE

General

Scope

Contractor is advised that the groundwater surface is high in the project area and that it could be within 5.5 feet below existing grade. Contractor shall provide the following services for control of groundwater, surface water, and excavation drainage.

Dewatering, depressurizing, and draining to allow demolition of existing facilities to maintain trench, structure, and embankment excavations in a dry and stable condition, and to control groundwater conditions for demolition and excavation work.

Protection of the work against surface runoff, exfiltration from existing pipes and structures, and rising flood waters.

Collection, treatment, and disposal of removed water.

Related Sections

Section C-43, Storm Water Pollution Prevention & Erosion Control Plan
Section E-05, Storm Water Pollution Prevention

References

This section contains references to the following documents. They are a part of this section as specified and modified. In case of conflict between this section and the listed documents, the requirements of this section shall prevail.

Reference	Title
OSHA 29 CFR Part 1926	Federal Regulations, Standards-Excavation
State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant discharge elimination system (NPDES) General Permit No. CAS000002	Water Discharge Requirements (WDRS) for Discharges of Storm Water Runoff Associated with Construction Activity

Definitions

Groundwater control includes both dewatering and depressurization of water-bearing soil.

Dewatering includes lowering the water table and intercepting seepage which would otherwise emerge from slopes or bottoms of excavations, and disposing of removed water. The intent of dewatering is to increase stability of excavated slopes; prevent dislocation of material from slopes or bottoms of excavation; reduce lateral loads on sheeting and bracing; improve excavating and hauling characteristics of excavated material; and prevent failure, heaving, or pumping of the bottom of excavation.

Depressurization includes reduction in piezometric pressure within soil strata not controlled by dewatering alone, as required to prevent failure, heaving, or pumping of excavation bottom or instability of excavations.

Excavation drainage includes keeping excavations free of surface water, seepage water, and exfiltration from existing pipes and structures.

Surface drainage includes use of temporary drainage ditches and dikes and installation of temporary culverts and sump pumps with discharge lines as required to protect the work from any source of surface water.

Equipment and instrumentation for monitoring and control of the dewatering system includes piezometers and monitoring wells, and devices, such as flow meters, for observing and recording flow rates.

Performance Requirements

Contractor shall conduct subsurface investigations to identify groundwater conditions and to provide parameters for design, installation, and operation of groundwater control systems.

Design a groundwater control system, compatible with requirements of all laws and regulations to produce the following results:

Effectively lower groundwater levels, reduce piezometric pressures, and eliminate infiltration of water.

Lower and maintain groundwater to levels at least two feet below the bottoms of excavations and to lower elevations if under foundation structures as required to obtain compaction. Develop substantially dry and stable subgrades for subsequent earthwork compaction and construction operations.

Preclude damage to adjacent properties, buildings, structures, utilities and other work.

Prevent the loss of fines, seepage, boils, quick conditions, or softening of the foundation soils.

Maintain stability of sides and bottoms of excavations.

Groundwater control systems may include single-stage or multiple-stage well point systems, eductor and ejector-type systems, deep wells, or combinations of these equipment types. Excavation and surface drainage may also include sump pumping.

Groundwater control and drainage systems shall be located so as not to interfere with utilities, construction operations, adjacent properties, or adjacent water wells.

Contractor shall assume sole responsibility for groundwater control systems and for any loss or damage resulting from partial or complete failure of protective measures and any settlement or resultant damage caused by the groundwater control operations. Groundwater control systems or operations shall be modified if they cause or threaten to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells, or affect potentially contaminated areas. Contractor shall repair damage caused by groundwater control systems or resulting from failure of the system to protect property as required.

Groundwater shall be tested and disposed of as specified in Section C-44.

Submittals

Submittals shall be provided in accordance with Section C-22 and shall include the following information:

Submit a Groundwater and Surface Water Control Plan for review by the Engineer prior to start of any field work. The Plan shall be signed by a Professional Engineer registered in the State of California. Submit a plan to include the following:

Results of subsurface investigation and description of the extent and characteristics of water bearing layers subject to groundwater control.

Names of equipment suppliers and installation subcontractors.

A description of proposed groundwater control systems indicating arrangement, location, depth and capacities of system components, installation details and criteria, and operation and maintenance procedures.

A description of proposed monitoring and control system indicating depths and locations of piezometers and monitoring wells, monitoring installation details and criteria, type of equipment and instrumentation with pertinent data and characteristics.

A description of proposed filters including types, sizes, capacities and manufacturer's application recommendations.

Design calculations demonstrating adequacy of proposed systems for intended applications. Define potential area of influence of groundwater control operation near contaminated areas.

Operating requirements, including piezometric control elevations for dewatering and depressurization.

Surface water control and drainage installations.

Proposed methods and locations for disposing of removed water.

Design calculations for sheet piling, if used, stamped and signed by a licensed engineer.

Environmental Requirements

Obtain all permits and approvals as required in Section C-44.

Comply with requirements of agencies having jurisdiction.

Comply with all laws and regulations for development, drilling, and abandonment of wells used in dewatering systems.

Obtain permit from the agency having jurisdiction under the National Pollutant Discharge Elimination System (NPDES), for storm water discharge from construction sites.

Obtain all necessary permits from agencies with control over the use of groundwater and matters affecting well installation, water discharge, and use of existing storm drains and natural water sources. Because the review and permitting process may be lengthy, take early action to pursue and submit for the required approvals.

Monitor groundwater discharge for contamination while performing pumping in the vicinity of potentially contaminated sites.

Products

Equipment and Materials

Equipment and materials shall be selected by Contractor as necessary to achieve desired results for dewatering. Selected equipment and materials are subject to review of Engineer through submittals required above.

Eductors, well points, and storage tanks shall be furnished, installed, and operated by an experienced contractor regularly engaged in groundwater control system design, installation, and operation.

All equipment shall be in good repair and operating order.

Sufficient standby equipment and materials shall be kept available to ensure continuous operation, where required.

Sheet piling, if used, shall be designed by a licensed engineer and the signed, stamped plans submitted to the City for acceptance prior to proceeding. Design of sheet piling shall be at no additional cost to the City.

Execution

Groundwater Control

Provide labor, material, equipment, techniques and methods to lower, control and handle groundwater in a manner compatible with construction methods and site conditions. Monitor effectiveness of the installed system and its effect on adjacent property.

Install, operate, and maintain groundwater control systems in accordance with the Groundwater and Surface Water Control Plan. Notify Engineer in writing of any changes made to accommodate field conditions and changes to the work. Provide revised drawings and calculations with such notification.

Provide for continuous system operation, including nights, weekends, and holidays. Provide standby pumping equipment. Provide appropriate backup energy source if electrical power is primary energy source for dewatering systems.

Monitor operations to verify that the system lowers groundwater levels at a rate required to maintain a dry excavation resulting in a stable subgrade for prosecution of subsequent operations.

Test and dispose of groundwater as specified in Section C-44.

Do not allow groundwater or drainage water levels to rise until foundation concrete has achieved its design strength and backfilling operations have begun.

Remove all groundwater control systems upon completion of construction or when dewatering and control of surface or groundwater is no longer required.

Replace any excavation performed for convenience of dewatering in foundation beds with materials as impermeable as original foundation material. Compact backfill in accordance with Section E-11, Earthwork, or as indicated on the Drawings.

Surface and Excavation Drainage Water Control

Intercept surface and excavation water and divert it away from excavations through use of dikes, ditches, curb walls, pipes, sumps or other approved means. The requirement includes temporary works required to protect adjoining properties from surface drainage caused by construction operations.

Divert surface, excavation, and seepage water into sumps and pump it into drainage channels or storm drains, as approved by agencies having jurisdiction. Provide settling basins or other appropriate treatment(s) for water quality control.

Measurement and Payment

All costs required for Control of Groundwater, Surface Water, and Excavation Drainage shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-09 SITE PREPARATION

General

Description of Work

Contractor shall perform site preparation work, as required by this section, during its initial activities at the Site. The Work of this section includes the following.

1. Installation of safety and protective barriers
2. Construction of Contractor Site access, work areas, and storage areas
3. Clearing, grubbing, stripping, and other initial work required for the earthwork operations
4. If construction occurs after November 15th, Construction of all-weather stable access route for City crews and vehicles entering the site to service. Access road shall be reconstructed as required to route it around the Contractor's work area and shall provide continuous, all-weather access to the satisfaction of the Engineer.
5. Contractor shall locate the existing utilities to be protected during construction including water and power lines. Contractor shall provide appropriate protective measures in areas of existing utilities to be protected.

Execution

Existing Facilities

Contractor shall review the Drawings and existing City as built drawings, maps and records, and other resources for the existing facilities at the Site to determine and mark the approximate locations of underground facilities. Locations of underground facilities within the work area shall be determined by private underground utility contractor and exploratory excavations prior to any excavations or construction traffic in the affected areas at no additional cost to the City.

Public utility agencies that are owners of underground utilities at the Site shall be contacted and coordinated by Contractor to have the utilities located and marked prior to construction activities in the affected areas. Following the marking by the utility agencies, the location of each underground utility shall be determined by exploratory excavations prior to any excavations in the affected areas.

Contractor shall review property maps and descriptions and field locate property corners. Rights of way and temporary construction easements shall be surveyed and staked.

Safety and Protective Barriers

Contractor shall install appropriate barriers such as temporary fencing, sound barriers, berms, or concrete traffic barriers.

Protective concrete slabs or encasements shall be provided for existing underground facilities that may be damaged by Contractor's equipment and vehicles.

Contractor shall prepare and submit drawings that define the proposed safety and protective barriers prior to any construction activities. Contractor shall also notify the cities consultant archaeologist prior to the start of earthwork.

Primary Site Access, Work and Storage Areas

Contractor shall develop its primary access, work, and storage areas.

Clearing, Grubbing and Stripping of Construction Areas

All construction areas shall be cleared of grass and weeds to at least a depth of 6". Site shall be cleared of structures, pavements, fences, concrete and masonry debris, trees, logs, tree stumps, loose boulders, and any other objectionable materials of any kind which would interfere with the performance or completion of the Work, create a hazard to safety, or impair the Work's subsequent usefulness or obstruct its operation. Loose boulders and rock greater than 6" in diameter shall be removed from the Site. Trees and other natural vegetation outside the actual lines of construction shall be protected from damage during construction. Trees and shrubs designated to be removed shall have the entire rootball removed along with all roots greater than ½-inch in diameter.

During clearing, all piles of soil, stone, rubble, and aggregate present within the construction area shall be excavated, stockpiled, and processed for later use as fill or backfill. If not an interference with construction, suitable soils may be used directly from the piles.

Within the limits of clearing, the areas below the existing ground surfaces shall be grubbed to a depth to remove all stumps, buried logs, and all other objectionable materials. Piping, connection lines and any other underground structures, debris, or waste shall be totally removed. If the subgrade is wet or pumping and is unstable or unsuitable, refer to Section E-11, Earthwork.

All materials from the clearing and grubbing process, that are not incorporated into the Work shall be removed from the Site and disposed of in compliance with Laws and Regulations. Material at the Site shall not be burned as a means of disposal.

Following stripping of the Site, Contractor shall allow a period of at least 3 working days for Engineer's Representative review for presence of unsuitable materials and allow the archeologist time to review the site conditions at that time.

Measurement and Payment

All costs required for Site Preparation shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-10 DEMOLITION, SALVAGE, AND ABANDONMENT

General

Description of Work

Demolition shall include the securing any and all permits required, furnishing all labor, tools, equipment and materials and performing all work necessary to cap utilities and demolish the existing **Blacksmith Shop and Residence** as required by the Contract Documents. Work shall include but not be limited to demolishing existing structures and removing fences, light poles, asphalt, concrete slabs, foundations and pipes below grade, backfilling demolished structures, abandonment of existing pipes at the property lines and other facilities, and salvage of items including moving the water tower, removal and disposal of onsite debris and demolished materials.

The Contractor is advised portions of the work may involve contact with hazardous materials and vapors and entry into confined spaces. Contractor shall comply with the 29CFR 1926, OSHA Safety and Health Standards for construction and state and local regulations and Cal-OSHA Construction Safety Orders, Article 31 Demolition.

Contractor shall assume sole and complete responsibility for the jobsite conditions including safety for persons and property. This requirement shall apply continuously for the entire duration of work.

Contaminated or hazardous materials exist on site including but not limited to lead and asbestos. Hazardous materials management shall be in accordance with Section E-15. Asbestos Abatement shall be in accordance with Section E-13. Lead-based paint material shall be contained in accordance with Section E-14.

Submittals

Contractor shall submit proposed methods, equipment, and sequence of operations for salvage and demolition of structures and other facilities. The submittal shall include proposed methods and materials for shutting off, capping, plugging, and removing pipelines and for protecting active utilities to remain. PG&E clearance shall be submitted with the City of Milpitas Demolition Permit Checklist.

Contractor shall provide a list of any hazardous or contaminated materials to be demolished or removed from the site, and hazardous materials to be used in any conjunction with the work.

Contractor shall complete and submit to the City of Milpitas Building Department a Demolition Permit Check List along with the permit application and fees.

The proposed demolition and abandonment schedule shall be submitted in accordance with Section C-22. For demolition of buildings and chemical facilities, the appropriate Fire Department shall receive a copy of the schedule prior to start of demolition activities.

Contractor shall submit written report and video recording of the preconstruction condition of existing structures and other facilities to remain.

Contractor shall notify Bay Area Air Quality Management District at least 10 days prior to any demolition.

Ownership of Material and Equipment

Materials and equipment not designated for reuse or salvage shall become the property of Contractor. All demolition materials and debris shall be salvaged or disposed of off-site in a lawful manner.

Products

Equipment and Materials for Demolition

Only equipment and materials submitted and approved shall be used for demolition.
The use of explosives will not be permitted for demolition work.
Fires shall not be used for disposal of demolished items or refuse.
Drop hammers, impact hammers, or other types of impact devices shall not be used under circumstances that may allow damage to existing underground utilities.
Contractor shall provide materials needed or required for temporary protection in the form of barricades, fences, enclosures, etc.

Execution

Salvage of Existing Facilities

Existing materials and equipment removed by Contractor under the provisions of the Contract, and not reused in the Work, or designated for salvage to the City, shall become Contractor's property and shall be removed from the site of the Work upon completion of the Work.

Contractor shall carefully remove, in a manner to prevent damage, any and all materials and equipment specifically designated in the Contract Documents to be removed and salvaged, or to remain the property of City. These items are the Blacksmith Shop Water Tower, the Blacksmith Shop doors, and the branded boards of the Blacksmith Shop. Contractor shall store and protect all salvaged items specified or indicated in the Contract Documents to be reused in the Work.

The approximately 15 by 15-foot Historic Water Tower Structure attached to the Blacksmith Shop is to have the LBP removed, be salvaged and moved to where the current residence is located. The sliding Blacksmith Shop doors (front and south side) are to have the LBP removed, salvaged ,wrapped with visqueen plastic (or approved equal), and then delivered to the City of Milpitas. Nine one-foot by one-inch historic branded boards from the Blacksmith Shop are to be abated and salvaged. These boards have been painted with lead-based paint and must be removed with Peel-Away (or approved equal) to protect the wood and shall then be delivered to the City of Milpitas.

Salvaged items that are not designated for reuse in the work, and items to be retained as City's property, shall be delivered to City by Contractor in good condition to a location designated by Engineer.

Any items noted to remain that are damaged during the removal, storage, or handling as a result of carelessness, negligence, or improper procedures shall be replaced by Contractor with corresponding items of equal or greater value as approved by the Engineer.

Contractor may at its option furnish and install new items in lieu of those indicated to be salvaged or reused, in which case the original items shall become the property of Contractor and shall be removed from the site after completion of the Work at no additional cost to the City.

Recycling and Disposal

All unsuitable materials including, but not limited to broken concrete and non-painted paving materials, pipe, vegetation, and other unsuitable materials, excess earth, debris, etc., shall be removed from the job site for recycling and disposal by the Contractor all to the satisfaction of the City Engineer or designee. The Contractor shall, to the maximum extent possible, reuse any useful construction materials generated during the project. The Contractor shall recycle all paving and structural materials including, but not limited to metal, aggregate base material, asphalt and concrete. Recycling shall be documented as required in Section C-57.

Environmental Controls

Contractor shall minimize the generation of dust and other airborne particles. As required, temporary enclosures and other suitable measures shall be used to prevent the spread of dust, dirt, airborne particles, and debris at no additional cost to the City. Contractor shall implement Best Management Practices as required and with mitigation measures identified in the environmental documents for this project. Contractor shall comply with the requirements of the Bay Area Air Quality Management District and other applicable regulations. Contractor shall implement additional dust control measures, as directed by the Engineer and at no additional expense to the City, if generation of dust and airborne particles has not been minimized. Continuous dust control is a critical requirement and will be vigorously enforced.

Noise generated by the demolition activities shall be limited to levels allowed by Laws and Regulations and in conformance with Section C-35. Demolition equipment shall have noise suppression devices.

Water shall not be used in a manner that creates dangerous or objectionable conditions such as flooding, erosion, overspray, or sedimentation in nearby ditches or streams. Storm water shall be contained and managed as required by Laws and Regulations and in conformance with Section C-43.

If underground fuel storage tanks, asbestos, PCBs, contaminated soils, or any other hazardous materials other than those identified in the contract documents are encountered the affected demolition work shall be stopped and Engineer's Representative and City notified promptly.

Promptly remove equipment and materials not designated for reuse or salvage and all waste and debris resulting from demolition operations. Dispose of removed equipment, materials, waste, and debris in a manner that is safe and conforms to applicable Laws and Regulations.

Examination of Site

Prior to demolition, Contractor shall make an inspection with Engineer's Representative to determine the baseline condition of existing structures and other facilities adjacent to the items designated for demolition. Contractor will make a written report and a complete video recording of the condition of each adjacent facility and will transmit the report and video recording to the Engineer for review. Contractor shall not proceed with demolition operations until after the inspection and report have been completed and the Engineer's Representative has authorized in writing that the Contractor may proceed.

Contractor shall mark or tag existing equipment to be salvaged or to remain in place as the property of City. Contractor will determine and mark the locations of the limits of removal for connecting piping, electrical facilities, and other related facilities as shown on the plans for Engineer's review prior to starting work.

Contractor shall locate existing exposed and buried active utilities and determine the requirements for their protection, or their disposition with respect to the demolition work.

Protection of Property

Contractor shall provide safe access to adjacent property, facilities, and buildings at all times. Roadways, sidewalks, and passageways shall not be obstructed. Contractor to maintain access at all times to facilities that are to remain and to maintain vehicular access through the south gate to critical facilities 24 hours per day. Contractor shall maintain clear ingress and egress to existing equipment at all times.

Demolition shall be performed using procedures that prevent damage to adjacent property, including landscaping and irrigation along Main Street and easement areas. Contractor shall promptly repair damage to City's property and property owned by others to the satisfaction of the Engineer.

Contractor shall be responsible for integrity of adjacent structures and facilities, and shall be liable for any damage due to movement or settlement. Suitable shoring for support of adjacent structures shall be installed and maintained.

If adjacent structures or facilities appear to be in danger of damage by the demolition operations, Contractor shall take additional steps to prevent damage at no additional cost to the City.

Contractor shall erect and maintain enclosures, barriers, warning lights, and other required protective devices.

Utility Services

Contractor shall comply with the operating rules and regulations of utility companies that have jurisdiction over utilities affected by the demolition operations. Contractor shall protect and maintain the existing electrical and phone services to the neighboring buildings. This utility service is essential for public health and safety, and Contractor shall take every precaution to properly protect these utilities. Underground Alert shall be notified prior to digging. This utility service to be removed is limited to this site only, and the neighbors are to remain undisturbed.

All utilities connected to structures to be removed shall be disconnected and capped in accordance with the specific utilities requirements.

Notify and coordinate with the utility companies and adjacent building occupants when temporary interruptions of utility services are required.

Backfill of Structures and Excavations

Backfill of excavations and structures shall be in accordance with Section E-11 – Earthwork.

Materials from the demolition work shall not be used for backfill unless otherwise indicated or approved by Engineer's Representative.

Demolition of Buildings and Other Structures

The means and methods of performing demolition, removal and salvage operations are the sole responsibility of the Contractor. However, equipment used and methods of demolition and removal will be subject to approval of the Engineer.

Buildings and structures shall be demolished to the lines and grades indicated. Where no limits are shown, the limits shall be 5' outside of the exterior walls of the existing facility and 5' beyond surface pavements and slabs. Removals beyond these limits shall be at Contractor's expense. If removals are considered excessive by Engineer's Representative, and will affect the performance, serviceability, or value of adjacent facilities, Contractor shall reconstruct the structures or utilities that were excessively removed.

Demolish structures to a minimum of 5' below the adjacent finished grade, unless otherwise indicated. When portions of structure walls will remain, remaining concrete floor slab shall be penetrated to allow ground water to enter the structure and allow the drainage of any trapped water. Demolish and remove all equipment, piping and items other than structural concrete within any portion of structures that remain. Backfill demolition excavation areas and building voids to the finished grades that conform to adjacent ground surfaces and provide positive drainage from the site. Backfill shall be in accordance with Section E-11, Earthwork.

Demolition of Electrical Facilities

Contractor shall have a licensed electrician verify that power has been properly disconnected to all facilities prior to commencing any demolition work. All florescent lights and ballast are to be recycled or disposed of in a Class I landfill. Contractor shall confirm this prior to commencing demolition work.

Demolition of electrical facilities shall be in accordance with applicable codes and standards for electrical construction.

Demolition of Pipelines and Yard Piping

Piping, including sewer lines, storm sewer, water lines, and electrical lines, shall be removed to the property limits shown on the Site Plan.

Normally, piping shall be removed to the first joint outside of the limits required. Where sections of pipe exceed 16' in length the piping may be cut using saws, cutting torches, or other approved methods to provide clean, unbroken, end points.

Underground piping is to be removed to the property limits.

Plugs for abandoned piping shall consist of solid grout plugs installed for a length of at least 2'. Grout shall be concrete with a compressive strength of 2,500 psi. As an alternative, Contractor may install approved plugs or caps that are of the same material as the pipe, as acceptable to the Engineer. Sand-cement slurry, also known as controlled-density fill, shall provide a minimum compressive strength of 50 psi.

Where underground piping is to be removed, and such piping is less than 18 inches below existing grade or future finished grade, the entire length of piping shall be removed.

Where existing piping is to be demolished, but a portion will remain in service, Contractor shall do the following.

1. Capping and plugging materials and installation work shall be in accordance with the Specifications. If the pipe materials are not in the Specifications, the applicable building codes, standards, and specifications that govern the remaining piping shall be used for installation of capping and plugging materials.

2. Remaining piping shall be pressure tested and disinfected before being returned to service in accordance with the applicable building codes, and as approved by Engineer.

Demolition of Trees and Shrubs

Trees and shrubs designated to be removed shall have the entire rootball removed along with all roots greater than ½-inch in diameter.

Measurement and Payment

All costs required for Demolition, Salvage, and Abandonment shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-11 EARTHWORK

General

Requirement

Contractor shall perform all earthwork indicated and required for construction of the Work, complete and in place, in accordance with the Contract Documents.

Before excavation activities begin Contractor shall control groundwater and surface water in accordance with the Contract Documents. Contractor is notified that the groundwater table could be high in this area, and that it could be just below existing grade. Contractor shall implement dewatering as needed at no additional cost to the City.

Earthwork included import, backfilling and compaction of trenches and foundation removal excavations, filling holes and depressions and rough grading to provide a smooth compacted surface with positive drainage towards the streets. Reuse onsite material (Type E fill), if available. Import fill (Type F fill) as necessary to meet the lines and grades shown on the Site Plan.

Stormwater BMPs (straw wattles) shall be in-place at all street fence line locations during and after grading.

References

This section contains references to the following documents. They are a part of this section as specified and modified. In case of conflict between this section and the listed documents, the requirements of this section shall prevail.

Reference	Title
29 CFR 1926	OSHA Safety and Health Standards for Construction
ASTM D422	Method for Particle Size Analysis of Soils
ASTM D1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures
ASTM D1633	Test Method for Compressive Strength of Molded Soil
ASTM D2419	Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D2487	Classification of Soils for Engineering
ASTM D2901	Test Method of Cement Content of Freshly Mixed Soil
ASTM D2922	Test Methods for Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D4253	Test Methods for Maximum Index Density of Soils Using a Vibratory Table
ASTM D4254	Test Methods for Maximum Index Density of Soils and Calculation of Relative Density
CA DOT TM 301, CA DOT TM 532, CA DOT TM 643	

Submittals

Submittals shall be made in accordance with Section C-22 and shall include test results, certifications and a source for all earthwork materials.

Products

Suitable Fill and Backfill Material Requirements

Fill and backfill materials shall be suitable selected or processed clean earth, rock, or sand, free from grass, roots, brush, or other vegetation, and free from corrosive and hazardous or deleterious materials, and debris.

Suitable Materials

Materials not defined as unsuitable below are considered suitable materials that may be used for fill and backfill construction subject to the indicated limitations.

Suitable materials may be selected and obtained from onsite excavations and designated borrow areas, may be processed on-site materials, or may be imported from offsite borrow areas and processing plants, subject to the approval of the Engineer. If imported materials are required by this Section or to meet the quantity requirements of the Project, Contractor shall provide the imported materials at no additional expense to City.

All imported materials shall be from a quarry source and must be tested for potential contaminants prior to being transported to the site. A testing frequency of one, 4-point composite sample for each 500 cubic yards of material (with a minimum of two, 4-point composite samples) shall be required. The required laboratory analyses shall be based on knowledge of the borrow site history and related potential environmental concerns. A proposed testing plan, including the planned number and type of analyses, a description of sampling protocols, and adequate information pertaining to the planned borrow site must be provided to the Engineer or Engineers Representative and approved prior to proceeding. A report documenting the testing results signed by a registered geologist or professional engineer must be submitted to the Engineer or Engineers Representative and approved prior to transporting the import material to the site. Testing requirements may be waived by the Engineer or Engineers Representative if adequate information pertaining to the planned borrow site is provided, and a determination by the Engineer or Engineers Representative is made that such testing is not warranted.

The following types of suitable materials are defined.

Type A (1" Class I crushed stone): Manufactured, angular, crushed stone with the following gradation requirements. The material shall have a minimum sand equivalent value of 75. Crushed stone shall be clean, hard, sound, durable, uniform in quality, and free of soft, friable, thin, elongated or laminated pieces, and disintegrated material. Crushed stone shall be the product of crushing quarried stone or boulders of such size that they will not pass a 6" square opening.

Sieve Size	Percentage Passing
1½ inch	100
1 inch	90-100
¾ inch	50-85
3/8 inch	10-25
No. 200	0-5

Type B (sand backfill): N/A

Type C (select backfill): Select backfill shall meet the following gradation requirements, and shall be granular, low to non-expansive, have a plasticity index of 15 or less, and a liquid limit of 30 or less. Suitable for subsequent backfill over pipe shading and for general backfill below-grade structures.

Sieve Size	Percentage Passing

3-inch	100
1-inch	87-100
No. 200	15-50

Type D: N/A

Type E (topsoil): Stockpiled topsoil material which has been obtained at the site by removing utilities and foundations.

Type F (aggregate base): Class 2 aggregate base shall meet all requirements of State Standard Specification Section 26-1.02A for ¾ inch maximum grading. To be used as part of interim pavements and subsequent backfill of low areas and depressions left from foundation removals.

Type G (sand-cement slurry): N/A.

Unsuitable Material

Unsuitable materials include the materials listed below.

Soils which, when classified under ASTM D 2487, fall in the classifications of Pt, OH, CH, MH, or OL, or in a classification that contains Pt, OH, CH, MH, or OL in combination with any other letter designation, such as CH/CL.

Soils which cannot be compacted sufficiently to achieve the density specified for the intended use, or are unstable or pump regardless of the degree of compaction.

Materials that contain contaminants including petroleum hydrocarbons, pesticides, heavy metals, volatile organic compounds (VOCs), semi-VOCs, asbestos, PCBs or other constituents which 1) may be classified as hazardous or toxic according to applicable regulations and/or 2) exceed health based environmental screening levels established by the Regional Water Quality Control Board.

Soils that contain greater concentrations of chloride or sulfate ions, or have a soil resistivity or Ph outside of the neutral range.

Topsoil, except as allowed below.

Rocks, stones, and boulders larger than allowed for use as suitable fill and backfill materials.

Soils that contain more than 5% organic matter when tested in accordance with ASTM D2974.

Soils that contain so much moisture that the required degree of compaction cannot be achieved, and circumstances prevent suitable drying prior to incorporation into the work.

Material that is not compatible with the design intent; acceptance is at the sole discretion of the Engineer's Representative.

Execution

Use of Fill and Backfill Material Types

Contractor shall use the types of materials as designated herein for all required fill and backfill.

Where these Specifications conflict with the requirements of any agency having jurisdiction, or with the requirements of the pipe material manufacturer, Engineer's Representative shall be immediately notified.

In case of conflict between types of pipe embedment backfill, Contractor shall use the backfill material that provides the greatest degree of structural support to the pipe.

In case of conflict between types of trench or final backfill, Contractor shall use the backfill material that provides the greatest in-place density after compaction.

Fill and backfill types shall be used in accordance with the following provisions.

Site fills shall be constructed of Type C material, or any mixture of Type C and Type A, Type B, Type C, Type D or Type F materials.

Over-Excavation

Excavations shall be over-excavated beyond the depth of subgrade indicated if requested by the Engineer. Such over-excavation shall be to the dimensions directed by the Engineer. The excavation shall then be backfilled to restore the required subgrade elevation.

Over-excavation less than 6" below the limits indicated shall be done at no increase in cost to City.

When the over-excavation is ordered by Engineer and is greater than 6" below the limits indicated, additional payment will be made to Contractor in accordance with an approved change order.

Pipeline and Utility Trench Excavation

Unless otherwise indicated or ordered, excavation for removal of utility pipelines and other utilities shall be open-cut trenches with flat, level subgrades in the transverse direction. When completed, trench subgrades and sidewalls shall consist of excavated surfaces that are in a relatively smooth and undisturbed condition, with all loose, sloughing, or caving soil or rock materials removed.

Trenching and shoring as needed shall be in full accordance with, but not necessarily limited to the following codes and regulations: Titles 8, 19, 21, 22 & 24 State of California Code of Regulations (CCR), California Occupational Safety and Health Administration (OSHA).

Disposal of Unsuitable, Excess Excavated, and Other Materials

Contractor shall remove from the Site and dispose of all unsuitable and excess excavated materials, and materials not used from existing onsite soil, aggregate, rubble, and waste stockpiles.

Contractor shall obtain all required permits, landowner, and agency approvals for disposal of unsuitable and excess excavated materials and shall pay all costs associated with the removal and disposal of the materials.

Placement and Compaction of Fill and Backfill Materials

Fill and Backfill material shall be placed in layer of 8 inches or less in loose thickness.

Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content.

Each layer or lift of material specified shall be compacted so that the in-place density tested is not less than the percentage of maximum density identified herein.

Flooding, ponding, or jetting shall not be used as a method of compaction. Compaction equipment and procedures are subject to approval by the Engineer.

Pipe Bedding and Trench Backfill

Trench backfill material shall be placed in 6-inch maximum loose lifts. Do not backfill in freezing weather or where the material in the trench is already frozen or is muddy, except as authorized. Where settlements greater than the tolerance allowed herein for grading occur in trenches and pits due to improper compaction, excavate to the depth necessary to rectify the problem, then backfill and compact the excavation as specified herein and restore the surface to the required elevation. Coordinate backfilling and testing of utilities.

Compaction Requirements

Compaction shall be in accordance with the following table:

Location or Use of Fill	Compaction Percentage of ASTM 1557 Maximum Dry Density
Fill:	
Engineered Fill (and areas within demolished structures)	90%
Native Expansive Clays	87-92% at moisture content 3% above optimum
Aggregate Base	95%
Landscape Area Fill	85%
Paving Subgrade (and all finish grades UNO)	95% to a depth of 6 inches
Pipe Bedding and Backfill:	
Below pipe	95%
To 12 inches above pipe	90%
Backfill	95%

Field Testing

All field soils testing will be done by a testing laboratory of City's choice at City's expense except as indicated below, and at the City's convenience in assessing Contractor's compliance with contract requirements.

Where soil material is required to be compacted to a percentage of maximum density, the maximum density at optimum moisture content will be determined in accordance with Method C of ASTM D 1557. Where cohesionless, free draining soil material is required to be compacted to a percentage of relative density, the calculation of relative density will be determined in accordance with ASTM D 4253 and D 4254. Field density in-place tests will be performed in accordance with ASTM D 2922 – Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth), or by such other means acceptable to Engineer.

In case the test of the fill or backfill show non-compliance with the required density, Contractor shall accomplish such remedy as may be required to insure compliance. Subsequent testing to show compliance shall be by a testing laboratory selected by City and shall be paid for by the Contractor at no additional cost to the City.

Contractor shall provide trenches and excavations, including trench support and groundwater removal, for City's field soils testing operations. The trenches and excavations shall be provided at the locations and to the depths required by Engineer's Representative. All work for test trenches and excavations shall be provided at no additional cost to City.

Measurement and Payment

All costs required for Earthwork shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-12 CHAIN LINK FENCE

General

Description

This section specifies work involved in construction of approximately 200 lf chain link fence which includes two 12 ft wide gates as shown on the Site Plan. Fencing shall be located next to the sidewalks where applicable. The Contractor shall furnish all labor, materials, equipment, and incidentals necessary to furnish and construct the fencing specified herein, and shown on the Drawings, complete in place.

Quality Assurance

Factory Testing

Wire fabric and barbed wire shall be tested for zinc coating weight by the method specified in ASTM A90. Ferrous metal, except the fabric, shall be tested for zinc coating uniformity by the method specified in ASTM A239; zinc coating shall withstand six 1-minute dips.

Submittals

Submittals shall be provided in accordance with Section C-22 and shall demonstrate full compliance with all aspects of this specification, and shall include, but not be limited to, complete manufacturers' data on all material, fittings, and coatings. Provide layout of the chain link fence as it is to be provided illustrating fence height, post sizes, bracing configurations, and accessories.

Products

Materials

Chain Link Fabric:

Chain link fabric shall be 9-gage wire, two (2) inches diamond mesh, interwoven, top selvage open, bottom selvage knuckle end closed, hot-dip galvanized after fabrication. Fabric shall conform with the requirements of ASTM A392 and shall have a Class 2 zinc coating.

Posts, Braces And Gate Frames:

Pipe used shall be ASTM A53, Schedule 40 steel pipe. Posts, rails, braces and frames shall be hot-dip galvanized per ASTM A53, A123 or A153, whichever is applicable. Galvanizing shall apply at least 1.8 oz of zinc per square foot of surface.

Line Posts:

Line posts shall be galvanized 2½" outside diameter Schedule 40 steel pipe, weight 3.65 lbs/LF.

End, Corner, Angle, and Gate Posts:

For end, corner, angle, and pull posts, use 2.875" outside diameter standard weight steel pipe, weight 5.79 lbs/LF. Gate posts shall be 4" outside diameter Schedule 40 steel pipe.

Cap:

Post cap shall be hot dip galvanized steel sized to post dimension and set screw retained. Post tops shall be pressed steel, or malleable iron, designed as a weather-tight closure cap for tubular posts. Provide one cap for each post.

Tension and Tie Wire:

Tension wire shall be zinc- or aluminum-coated coil spring steel wire not less than No. 7 gage (0.177" in diameter). Miscellaneous wire shall be zinc-coated steel. Reinforcing wire shall have minimum tensile strength of 75,000 psi, zinc-coated for use with zinc-coated fabric. Tie wire shall be aluminum alloy of 0.144 inch diameter for attaching fabric to intermediate posts. Preformed clips of 6 gage, zinc-coated, steel wire may be used for attaching fabric to intermediate posts. Hog Rings shall be aluminum wire of 0.110 inch diameter for attaching fabric to reinforcing wires.

Stretcher Bars:

Stretcher bars shall be one-piece lengths equal to full height of fabric with a minimum cross-section of 3/16" by ¾". Provide 1 stretcher bar for each gate and end post and 2 for each corner and pull post.

Stretcher Bar Bands:

Bar bands shall be heavy pressed steel, spaced not over 15" on center to secure stretcher bars to tubular end, corner, pull, and gate posts.

Braces:

Brace pipe shall be of the same material as the top rail and shall be installed midway between the top rail and extend from the terminal post to the first adjacent line post. Braces shall be securely fastened to the posts by heavy pressed steel and malleable fittings, then securely trussed from line post to base of terminal post with a 3/8" truss rod and tightener.

Fittings:

Fittings shall be of malleable steel, cast iron, or pressed steel, galvanized to meet the requirements of ASTM A153. Fittings shall include stretcher bars and clamps, clips, tension rods, brace rods, hardware, fabric bands and fastening, and all accessories.

Gate Frames:

Gate frames shall be constructed of 1.90" outside diameter tubular members welded at all corners or assembled with fittings. On steel, welds shall be painted with zinc-based paint. Where corner fittings are used, gates shall have truss rods of 3/8" minimum nominal diameter to prevent sag or twist. Gate leaves shall have vertical intermediate bracing as required, spaced so that no members are more than 8' apart. Gate leaves 10' or over shall have a horizontal brace or one 3/8" minimum diagonal truss rod and shall be provided with turnbuckles or other equivalent provisions for adjustment.

Gate Fabric:

Gate fabric shall be the same type as used in the fence construction. The fabric shall be attached securely to the gate frame at intervals not exceeding 15".

Gate Hinges:

Gate hinges shall be of adequate strength for the gate and with large bearing surfaces for clamping in position. The hinges shall not twist or turn under the action of the gate. The gates shall be capable of being opened and closed easily by one person.

Gate Latches and Keepers:

Gate latches and keepers shall be provided for all gates to the satisfaction of the Engineer. Latches shall be arranged for locking with padlocks. Keepers shall consist of a mechanical device for securing the free end of a vehicle gate when in the full open position and hold it in the open position until manually released. Provide a concrete encased sleeve for keeper rod in both the gate open and gate closed positions.

Execution

Fence

Chain link fabric shall be taut and shall be attached to posts, rails, and wires with galvanized fabric bands or tie wires at a maximum spacing of 12" on posts and 18" on the rails.

The line of the fence shall be cleared of all obstructions and surface irregularities and the bottom of the fence shall be to uniform grade. All fence shall be constructed with a top and a bottom tension wire.
Terminal posts, gate, and line posts shall be set thirty-six (36) inches in concrete bases. There shall be three inches of concrete from bottom of post to bottom of concrete footing. Top of concrete shall be sloped for water runoff. Top of footing shall be set two (2) inches above finished grade. Concrete bases for terminal, line, and gate posts shall be allowed to cure for not less than seven (7) days before wire fabric is placed.

Fabric is to be fastened to line posts with fabric bands spaced approximately fourteen (14) inches apart and to top and bottom tension wire with 9 gauge galvanized tie wires spaced approximately twenty-four (24) inches apart. Bottom and top tension wire shall be seven (7) gauge galvanized coil spring steel.

Brace each gate and corner post back to adjacent line post with horizontal center brace rail. Install brace rail, one bay from end and gate posts.

The placing of the rails, braces, and the wire fabric shall be accomplished in such a manner that the finished fence shall be taut, true, and of precise workmanship throughout. The fabric shall be stretched so that no slack sections remain at any point. The fabric shall be securely tied to posts and rails in a manner so that the fabric will remain tight and immovable.

Position bottom of fabric two (2) inches above finished grade with tension wire stretched taut between posts. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.

Connect fence to existing fences as indicated, provide end posts with braces for every direction of strain at junction with existing fences. Fasten tension wire in new and existing fences to posts.

Gates

Gate frames shall be fabricated with welded joints or rigid connectors. The fabric shall be the same as that used for the fence and shall be rigidly attached to the frames. Frames shall be suitably braced and trussed. Gates shall be equipped with suitable offset hinges to permit a 180º swing and a drop bar locking device with provision for padlocking.

Provide concrete center rest and drop bolt retainers at center of double gate openings. Gates shall be so set that they are true and will swing freely.

Measurement and Payment

All costs required for Chain Link Fence shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-13 HAZARDOUS MATERIALS MANAGEMENT- ASBESTOS

General

Prior to demolition of structures, all asbestos containing material must be removed.

Scope of Work

The Contractor shall furnish all labor, material, equipment, services, testing, employee training, fit test, medical exams, transportation, and daily expense to meet the requirements of this Specification.

The Contractor shall obtain all required permits, licenses, registrations, notifications, and regulatory approvals required by law (federal, state and local).

A hazardous materials survey was conducted SCS Engineers. Materials found or presumed to contain asbestos at this Project site are listed in the reference Asbestos & Lead-Based Paint Investigations attached. Vinyl flooring sheeting and transite pipes with ACBMs were identified. It is the responsibility of the contractor to inspect the structures to determine the locations and quantities of the identified materials. Please see the Asbestos & Lead-Based Paint Investigation, an appendix included in the Information Available to Bidders.

Contractors shall assume that positive test results for a particular material will apply to other occurrences of the same material. Known hazardous materials, other than Asbestos Containing Material (ACM) and Presumed Asbestos Containing Material (PACM) that have the potential to be disturbed at this Project site are listed in Sections E14 and E15.

Abbreviations and Definitions

Abbreviations

ABATEMENT	Complete removal of all Asbestos in the work area (> 20years)
ACM	Asbestos Containing Material
ACBM	Asbestos Containing Building Material
AHERA	Asbestos Hazard Emergency Response Act
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CSLB	Contractor's State Licensing Board
DOSH	Division of Occupational Safety and Health
DTSC	California Department of Toxic Substances
ELAP	Environmental Laboratory Accreditation Program
FVC	Forced Vital Capacity
FEV	Forced Expiatory Capacity
HEPA	High Efficiency Particulate Air
HVAC	Heating, Ventilation, and Air Conditioning
INTERIM CONTROL	Partial removal of Asbestos in the work area.(< 20 years)
NEA	Negative Exposure Assessment
NESHAPS	National Emissions Standard for Hazardous Air Pollutants
NPE	Negative Pressure Enclosure
NVLAP	National Voluntary Laboratory Accreditation
O&M	Operations and Maintenance
PACM	Presumed Asbestos Containing Material
PCM	Phased Contrast Microscopy

PEL	Permissible Exposure Limit
PLM	Polarized Light Microscopy
PPE	Personal Protection Equipment
RACM	Regulated Asbestos Containing Material
SMR	Single ply Membrane Roof
TEM	Transmission Electron Microscopy
TSI	Thermal System Insulation
BAY AREA AQMD	Bay Area Air Quality Management District

Definitions

The following definitions are provided for additional clarification and may exceed Federal, State or local regulatory requirements.

1. For the purpose of Worker protection, ACM is defined as greater than 1 tenth of 1 percent by weight (0.1 percent). For the purpose of waste disposal, ACM is defined as greater than 1 percent by weight (1.0 percent). The definitions of friable vs. non-friable ACM follow Bay Area AQMD Rule 2.
2. Ambient Air Quality is established with a TEM baseline sample prior to the commencement of asbestos-related Work in areas where there is interior asbestos abatement work. Baseline samples will not be required for exterior roofing or pipe gasket removal work.
3. Class I Asbestos Work involves the remediation of TSI or surfacing material when:
   a. More than 1 glove bag is used;
   b. More than one 60 inch by 60 inch waste bag is used; or,
   c. The Work is not repair or maintenance as defined by Class III.
4. Class II Asbestos Work involves the remediation of non-TSI or non-surfacing when:
   a. More than 1 glove bag is used;
   b. More than one 60 inch by 60 inch waste bag is used; or,
   c. The Work is not repair or maintenance as defined by Class III.
5. Class III Asbestos Work involves repair and maintenance of ACM/PACM that is either Class I or Class II, but does not exceed either 1 glove bag or one 60-inch disposal bag.
6. Class IV Asbestos Work refers to clean-up operations of Class I, II, or III Projects. Class IV Asbestos Work does not refer to incidental contact by maintenance Workers (see 8 CCR 5208 for custodial/maintenance Workers guidelines).
7. Negative Pressure Enclosures (NPE) refers to full containment, mini-containments, and glove bags under negative pressure with HEPA filtration. Each NPE should be smoke tested prior to commencing each work shift and a manometer should be attached to the containment to prove -0.04 inches negative pressure differential. Ensure that all air movement is away from Workers toward HEPA unit. All electrical circuits should be shut off unless a GFI is used. Each glove bag must also be smoke tested prior to use. No sliding or reuse of the glove bag is permitted, adjacent material must be sealed, and a minimum of 2 Workers are required to perform glove bag operations.

Submittals

Submit in accordance with Section C-22.

Submit names, addresses and telephone numbers of at least 3 Project managers or owners (not employed by Contractor) for whom Contractor has performed asbestos remediation jobs of similar size and character to the Work specified in this Contract.

Submit copies of all regulatory agency notifications and permits.

Submit Worker Training, Respiratory Fit Test, and Medical Certificates.

1. Training Certificates: For each employee who will be employed on the Project, submit a copy of the employee's asbestos training certification.
3. Qualifications of person taking Personal Air Samples: Submit the qualifications of the person who will be responsible for collecting personal air samples (PCM) of the Contractor's employees.
4. Respiratory Fit Test: For each Asbestos Worker employed on the Project, submit a copy of a fit test successfully passed within the previous 12 months.
5. Physician's Certification of Medical Fitness: Submit evidence of each asbestos-trained Worker successfully passing a medical examination within the previous 12 months. The medical exam shall conform to the standards cited in 8 CCR, Section 1529, Appendices D and E.

Submit a copy of the Contractor's written respiratory protection program.
Submit a copy of Contractor's written medical surveillance program.

Submit confirmation on company letterhead that the Contractor has written safety programs for Injury Illness Prevention, Hazard Communication, Fall Protection, Lock Out Tag Out, and Confined Space.

Submit proposed Work plan and schedule for accomplishing asbestos remediation activities. The Work plan shall be Project specific and address Project site preparation, site and engineering controls, Worker protection and exposure monitoring. Work will not commence until Plan is reviewed and approved by the Engineer.

Submit copies of the manufacturers' material safety data sheets for all products proposed for use on the Project.

Any laboratory performing PCM, PLM, and/or TEM sample analysis for the Contractor shall submit evidence of certification and accreditation by the National Voluntary Laboratory Accreditation Program (NVLAP).

Submit copies of HEPA equipment leak test results to the Engineer prior to starting Project site Work. Leak testing shall be performed on Project site. The leak-testing firm must be independent from the asbestos contractor. Leak test results shall identify equipment by make, model and serial number.

Submit an emergency contact list; include name, phone number, fax number and pager number for Contractor's supervisor or competent person who can be reached on a 24-hour basis.

Submit a Waste Disposal Plan that includes estimated number of container(s), size of containers(s), hazardous material transporter name and disposal site before start of work.

Submit Asbestos Remediation-Asbestos As-Built within 14 calendar days of the last day of field Work and prior to a request for application for payment. As-built summary shall include hazardous material transporter name and disposal site. Include copy of Respirator Fit test, Medical Report, required Training Certificate of all who entered the containment and a copy of the sign in-out sheet.

Contractor's Qualifications

The Contractor performing asbestos remediation Work must be a currently Certified Asbestos Abatement Contractor with the California Contractor's State License Board.

The Contractor performing asbestos remediation Work must be currently registered with the California Department of Industrial Relations, Division of Occupational Safety and Health.
Contractor's personnel performing Class I, II, III, or IV Asbestos Work shall meet the training requirements in CCR, Title 8, Section 1529.

Regulations

The Contractor shall comply with the most recent edition of applicable Federal, State, and local standards, laws, codes and regulations. If a conflict exists between referenced regulatory requirements and Contract Documents, the Contractor shall notify the Engineer in writing, contractor shall adhere to the strictest standard unless otherwise authorized. Contractor performing Work contrary to mandated laws shall bear full legal and financial responsibility for the violations.

The list of regulators and regulations, cited below, serves as a reference for the most commonly used standards governing the asbestos industry:

FEDERAL REGULATORS AND REGULATIONS
- a. EPA - Environmental Protection Agency
  - (1) 40 CFR, Part 763, Subpart E - AHERA
- b. OSHA - Occupational Safety and Health Administration
  - (1) 29 CFR 1926.1101 - Construction Standard
  - (2) 29 CFR 1910.1001 - General Industry Standard
  - (3) 29 CFR 1910.147 - Lock Out - Tag Out
- c. NESHAPS - National Emission Standards for Hazards Air Pollutants
  - (1) 40 CFR 61, Subpart M - Asbestos Emissions
  - (2) 40 CFR 61, Subpart A
- d. DOT - Department of Transportation
  - (1) 49 CFR 270-273

STATE REGULATORS AND REGULATIONS
- a. COSHA - California Department of Occupational Safety and Health
  - (1) CCR, Title 8, Section 1529 - Construction Standard
  - (2) CCR, Title 8, Section 3203 - Injury Illness Prevention
  - (3) CCR, Title 8, Section 5194 - Hazard Communication
  - (4) CCR, Title 8, Section 5157 - Confined Space
  - (5) CCR, Title 8, Section 5208 - General Industry Standard
- b. DTSC - Department of Toxic Substance Control
  - (1) CCR, Title 22, Sections 66261.24, 66268.7, 66268.114
- c. CIWMB - California Integrated Waste Management Board
- d. SWQCB - State Water Quality Control Board CCR, Title 23
- e. CSLB - California State Licensing Board
  - (1) Business and Professional Code Section 7058.5

LOCAL REGULATORS AND REGULATIONS
- a. Bay Area Air Quality Management District
  - (1) Reg 11 Rule 2

Notification and Permits

The Contractor is responsible for notifying Federal, State and local agencies, obtaining all required permits/extensions, and paying all related fees.

Bay Area Air Quality Management District

1. Provide 10 days notification to Bay Area AQMD for any demolition or renovation job with RACM that exceeds a combined amount of 260 lineal feet, 160 square feet or 35 cubic feet, or prior to any building demolition even if no asbestos is present.

A waste manifest form shall be completed by the Contractor and a copy submitted by the Engineer prior to the Contractor transporting hazardous materials from the work.

Products

Materials

Surfactants

The Contractor may use Foster 32-90, Certane 2075 or equal for amended water applications. H.B. Fuller Co., Foster Products Corporation, Vadnais Heights, MN manufactures the Foster product. Certech, Eden Prairie, MN Prairie, manufactures the Certane product.

Encapsulants

The following products shall be applied using a brush or an airless sprayer. The Contractor shall follow strict manufacturer's instructions regarding surface preparation, ambient air conditions, depth of material penetration, recommended thickness of a dry application, and curing time.

a. For penetrating and lockdown purposes use Foster 32-60, Certane 909 or equal.
b. For bridging purposes use Foster 32-32, Certane 2000 or equal.
c. For high temperature applications, e.g., steam pipes, use Foster 84-18, Certane 1000 or equal.

Any proposed equal to the products listed above must meet the following criteria: submit product information prior to the start of the Project; non-toxic and non-irritating as defined by the Hazardous Substance Control Act; sufficiently tinted to provide contrast with the material being coated; and have a minimum 60 psi Batelle Standard impact rating.

All products shall be rated UL Class A and have a flame resistance/spread rate less than or equal to 25 as designated by the ASTM code E 162.

Polyethylene Bags and Sheeting

Poly sheeting used for asbestos containments are required to be:

a. Six millimeters thick;
b. Meet the following standards - ASTM E-84, with a flame resistance/spread rate less than or equal to 25 ASTM (E-162).

The polyethylene sheeting used for containment or critical barriers shall be fire rated. Polyethylene bags or sheeting used for waste shall be clear.

Adhesive Removers

All adhesive removers shall meet the Hazardous Substance Control Act standards for non-toxic and non-irritating properties.

All adhesive removers shall be non flammable and contain less than 1 percent (by volume) any chlorinated hydrocarbon solvents.

Equipment

HEPA filtered equipment, such as vacuums and negative air machines, must be leak tested in accordance with ANSI Z9.2 Standard. Test agent must be a non-hazardous substance. Equipment leak testing must be performed on-site by a firm independent of the Contractor. Documentation following equipment testing shall be provided to the Engineer.

Tools and equipment shall arrive at the Project site free of asbestos debris and dust.

HEPA equipment must be clean when arriving on Project site. All openings on the equipment must be taped shut until ready for operation.

All electric tools and equipment shall be connected to a GFI.

Execution

Safety

In accordance with State and Federal laws, Contractor shall be solely responsible for conditions at the Project site; including the safety of all persons and property during the performance of Work. To ensure effective communication in safety matters the Contractor shall participate and conduct the following meetings:

On the first day of asbestos field Work, the Contractor shall conduct a safety meeting (tailgate) for its employees which alerts them to the specific hazards of the Project. The Contractor must conduct the safety meeting in the primary language of its employees. If needed, more than 1 primary language presentation must occur.

On a weekly basis, the Contractor shall conduct a safety meeting with its employees.

Work Site Preparation

Prior to beginning any on-site Work preparation, the Contractor shall walk the Project area with the Engineer to discuss site characterization, regulated area set-up, access controls, background samples, security, and safety issues.

Post all regulatory notices, permits, sign in-out roster and air sample results at the primary entrance to the Project site.

All Class I, II, and III Work shall be conducted within a regulated area per CCR, Title 8, Section 1529.

Work Site Control

The Contractor shall restrict the Work areas to authorized personnel; including, the Contractor's employees, Engineer, and regulatory agency representatives.

At regulated Project sites, the Contractor shall use caution tape to demarcate the boundary of the Work zone and post required warning signs.

1. The first sign is required by Title 8, CCR 1529 requires a sign stating:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

All unauthorized personnel are to remain outside the regulated area.

If inclement weather threatens the Project site, the Contractor shall take all necessary measures to ensure asbestos-contaminated debris does not migrate from regulated areas.

If wind speed threatens the Project site, the Contractor shall erect a wind barrier or suspend operations until the wind is below 15 mph.

Recordkeeping

The Contractor shall maintain the following records at the regulated Work area and copies are to be provided in the "As-Built" summary at the end of the job:

1. Site Log (sign-in/sign-out).
2. Incident Log and Emergency Action Plan.
3. Personal air sampling results.
4. Area sample results from inside and outside the regulated area.
5. Supervisor (Contractor) and Worker training certificates, fit tests, and medical clearance certificates.
6. Bay Area AQMD notification.

Engineering Controls

Negative Pressure Enclosure (NPE)

A negative pressure enclosure is required when ACM or PACM is friable or could become friable during the removal process. Non-friable material that remains non-friable during the removal process does not require a negative pressure enclosure. Containment systems shall comply with CCR, 8, 1529.

Wet Methods

Prior to removing ACM/PACM, the Contractor shall adequately wet the material with an approved surfactant and method. During and after removal, the waste must remain wet. If needed, HEPA vacuum excess moisture from bags, polyethylene sheeting or floors.

Removal Operations

The Contractor must have trained personnel on-site during the removal of any RACM.

During gross removal operations, keep the waste wet, continually bag the waste, and ensure all accumulated debris is completely sealed by the end of each shift. After gross debris is bagged, use wet wipe methods or HEPA vacuums to clean the polyethylene sheeting.

Worker Protection

The following protective measures are required for asbestos-related Work associated with this Project:

1. Employee Training/Supervision
   a. The Contractor shall provide information to its employees about asbestos and other hazards per the Hazard Communication standard (8 CCR, 5194).
   b. An accredited AHERA course provider must train asbestos workers and supervisors.
2. Respiratory Protection
   a. The Contractor shall provide respiratory protection to all employees where there is the potential for exposure to asbestos dust at or above the permissible exposure limit. Respiratory protection shall be provided at no cost to the Contractor's employees
   b. The Contractor's employees who wear a respirator must have passed a fit test within the previous 12 months (8 CCR 1529) to perform contract work.
3. Protective Clothing
   a. The Contractor shall provide workers and authorized visitors with sufficient sets of protective clothing whenever there is potential exposure to asbestos dust or disturbance of ACM/PACM. Tyvek, Kleenguard coveralls or equal with attached hood and feet are acceptable.
   b. The Contractor shall provide rubber or latex gloves, rubber boots, eye protection, earplugs and hard hats as needed per the 8 CCR, Hazard Communication and Personal Protection Equipment standards.
4. Medical Surveillance
   a. As required by 8 CCR 1529, the Contractor shall establish a medical surveillance program for all employees performing Asbestos Work
   b. The Contractor shall provide copies of the physician's written opinion for each employee who works at the site (8 CCR 1529).
   c. All of the Contractor's Asbestos Workers and supervisors must pass the medical, FVC, FEV and chest x-ray examinations.

Personal Hygiene

The Contractor shall require that no employee be allowed to apply cosmetics, consume food, tobacco products, or beverage in the regulated Work area.

Air Monitoring Program

Personal Air Samples - Contractor Responsibility

The Contractor must presume Class I, II, and III Asbestos Work shall exceed the PEL. The Contractor must perform both 30-minute excursion and 8 hour time-weighted average personal air sampling, unless a negative exposure assessment has been established at this location.

Contractor shall perform personal air sampling on a minimum of 25 Percent of the work force performing like tasks (8 CCR 1529).

Specific Work Protocols

Approved Work Plan will identify Contractor's specific work protocols for each different type of work and work method.

Inspections

Inspection Responsibilities - Contractor

Prior to beginning any asbestos-related Work, the Contractor's asbestos supervisor shall inspect the regulated Work areas for any building damage, hazardous conditions, and/or irregularities that may contribute to an unsafe Work environment. Any condition that poses a hazard or potential hazard to the Contractor's employees or must be immediately reported to the Engineer.

The Contractor is responsible for monitoring and enforcing all requirements of this specification.

Waste Disposal

Packaging Asbestos Waste

All asbestos containing waste material must be packaged in a safe and legal method.

Labeling Asbestos Waste

1. Each package of friable asbestos waste shall have a label affixed with the following information:
   a. Hazardous Waste warning;
   b. Generator's Name, address, and phone number;
   c. Location information, e.g., Building, department, room;
   d. Manifest document number, and
   e. Date.

Storing Asbestos Waste

At the end of each shift, all asbestos waste shall be stored in a lockable container or shipped off site. Accumulated waste shall not be allowed to remain in the regulated Work area overnight.

Transporting Asbestos Waste

A registered waste transporter, hired by the Contractor, is responsible for transporting asbestos waste to an EPA certified disposal facility. The transporter's vehicle must be clearly marked with warning signs required by the Bay Area AQMD and DOT.

Disposal

All asbestos waste must be disposed at licensed facility.

The Contractor shall provide weight slips and verification of the hazardous waste disposal site to the Engineer within 45 days of each shipment.

Recordkeeping

The Contractor shall provide the Engineer with copies of all asbestos waste disposal documents.

Fees

The Contractor is responsible for all fees and charges related to asbestos waste transport and disposal operations; including, waste stream profiles. Refer to SW-846-1311 (TCLP) and CCR, Title 22 Section 66261 (STLC) for waste stream identification requirements.

Project Close Out

Before the payment is issued to the Contractor the following information shall be provided to the Engineer:

a. Contractor's name, address, CSLB certification number, DOSH registration number, and tax identification number.
b. Name of hazardous materials transporter, address, phone number and registration number.
c. ELAP laboratory name(s), address(es), and phone number(s) used to perform PCMs, TEMs, and/or PLMs.
d. Provide an inventory of the ACM/PACM removed from the Project site.
e. Number of employees who worked on the Project.
f. Date on-site Work began.
g. Date on-site Work was completed.
h. Work methods.
i. Name, address, phone number and EPA registration number of waste disposal site.
j. All weigh slips must be provided as required in the "WASTE DISPOSAL" section of this specification or final payment will be withheld.

Measurement and Payment

All costs required for Hazardous Materials Management - Asbestos shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment, testing, transportation, disposal and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-14 HAZARDOUS MATERIALS MANAGEMENT- LEAD

General

The work specified herein is lead-based paint (LBP) (synonymous herein with lead containing paint and lead containing materials) abatement and demolition which is to be performed by competent persons trained, knowledgeable and qualified in the techniques of LBP abatement, demolition, and the handling and disposal of LBP and/or LBP contaminated materials. Lead containing paint bonded to building materials does not require removal prior to demolition and disposal. Asphalt surfaces impacted by LBP must have the paint removed prior to asphalt demolition so the asphalt can be removed as construction waste and paint does not flake during demolition. Asphalt impact by LBP shall not be recycled unless the LBP is complete removed.

Salvage item form the Blacksmith shop require lead abatement. The branding boards and doors shall have the lead-based paint removed with minimal impact to the wood. The LBP on the branding boards shall be removed using Peel-Away (or approved equal). The Water Tower exterior boards are impacted with LBP and it shall be completely removed.

Contractor shall follow all regulations regarding lead in construction, including but not limited to, employee training, employee air monitoring and dust control. If lead containing paint is peeling, flaking or blistered it shall be removed prior to demolition. Removal and disposal of lead containing materials shall comply with all regulations and these specifications.

Scope of Work

The Contractor shall furnish all labor, material, equipment, services, testing, employee training, fit test, medical exams, transportation, and daily expense to meet the requirements of this Specification.

The Contractor shall obtain all required permits, licenses, registrations, notifications, and regulatory approvals required by law (federal, state and local).

SCS Engineers conducted a survey on behalf of the City identifying flaking painted surfaces that contained lead. Please see the Asbestos & Lead-Based Paint Investigations, an appendix included in the Information Available to Bidders. Materials found or presumed to contain lead at this Project site are listed in the attached reports. It is the responsibility of the contractor to inspect the structures to determine the locations and quantities of the identified materials. The actual means and methods of preparation and disposal is the responsibility of the Contractor, with approval by the engineer. Because many painted surfaces appeared similar, not all surfaces were sampled; it should be assumed that all painted surfaces throughout the blacksmith shop contain lead. All painted surfaces that are peeling or stratifying from the substrate should be scraped until the remaining paint can be classified as fully adhered or the surface should be sealed so as not to flake during removal and disposal. Refer to the drawings for the approximate locations of the buildings or structures that contain materials requiring abatement and/or demolition. It is the responsibility of the contractor to inspect the structures to determine the locations and quantities of the identified materials. Hazardous materials, other than lead containing material (LCM) and presumed lead containing material (PLCM), that have the potential to be disturbed at this Project site are listed in Sections E13 and E15.

Abbreviations

AA	Atomic Absorption – Flame (EPA SW-846)
AIHA	American Industrial Hygiene Association
AL	Action Level 30 micrograms per cubic meter of air (30 μ/m^3) averaged over an 8 hour period (8 hr TWA)
BLL	Blood Lead Level
CEPA	California Environmental Protection Agency
CFR	Code of Federal Regulations

CSLB	Contractor's State Licensing Board
DIR	Division of Industrial Relations
DL	Deciliter
DOSCH	Division of Occupational Safety and Health
DOT	Federal Department of Transportation
DTSC	California Department of Toxic Substances
ELLAP	Environmental Lead Laboratory Accreditation Program
ELPAT	Environmental Lead Proficiency Analytical Testing Program
FVC	Forced Vital Capacity
FEV	Forced Expiatory Capacity
HEPA	High Efficiency Particulate Air
HUD	Housing and Urban Development
HVAC	Heating, Ventilation and Air Conditioning
LBP	Lead Based Paint (paints, varnish, shellac, etc.)
LCM	Lead Containing Material
µg	Micro gram – part per billion (ppb)
MSDS	Material Safety Data Sheets
NAAQS	National Ambient Air Quality Standards
NAM	Negative Air Machine
NESHAPS	National Emissions Standard for Hazardous Air Pollutants
NPE	Negative Pressure Enclosure
NVLAP	National Voluntary Laboratory Accreditation
O&M	Operations and Maintenance
PEL	Permissible Exposure Limit 50 micrograms per cubic meter of air (50 μ/m^3) averaged over an 8 our period (8 hr. TWA)
PLCM	Presumed Lead Containing Material
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
TCLP	Toxicity Characteristic Leaching Procedure (mg/L)
TTLC	Total Threshold Limit Concentration (wet-weight mg/kg)
TSP	Tri Sodium Phosphate
TWA	Time Weighted Average
STLC	Soluble Threshold Limit Concentration (mg/L)
ULPA	Ultra Low Penetrating Air
XRF	X-ray fluorescence
ZPP	Zinc Protoporphyrin

Submittals

Submit in accordance with Section C-22.

Submit names, addresses and telephone numbers of at least 3 Project managers or Owners (not employed by Contractor) for whom Contractor has performed lead abatement jobs of similar size and character to the Work specified in this Contract.

Submit copies of all regulatory agency notifications and permits.

Submit Worker Training, Respiratory Fit Test, Blood Test Results and Medical Certificates

1. Training Certificates: for each employee who will be employed on the Project, submit a copy of each employee's lead training certification.
2. Qualifications of person taking Personal Air Samples: Submit a copy of the field

technician's DHS certificate that will be collecting personal air samples.

3. Respiratory Fit Test: For each Lead Worker employed on the Project, submit a copy of a fit test successfully passed within the previous 12 months.
4. Physician's certification of Medical Fitness: Submit evidence of each lead-trained Worker successfully passing a medical examination within the previous 12 months. The medical exam shall conform to the standards cited in 8 CCR, Section 1532.1 (j).
5. Submit the latest blood lead level (BLL) and ZPP results for each worker. The frequency of re-administering these tests is outlined in 8 CCR, Section 1532.1 (j).

Submit a copy of the Contractor's written respiratory protection program.

Submit a copy of Contractor's written medical surveillance program.

Submit names of employees who will participate in the project, including delineation of experience, training, and assigned responsibilities during the project. The Contractor will designate a person(s) on site during the entire project, with all the necessary and required qualifications to administer First Aid, CPR, and any related assistance required.

Submit confirmation on company letterhead that the Contractor has written safety programs for Injury Illness Prevention, Hazard Communication, Fall Protection, Lock Out Tag Out, and Confined Space.

Submit proposed Work plan and schedule for accomplishing lead paint removal activities. The Work plan shall be Project specific and address Project site preparation, site and engineering controls, Worker protection and exposure monitoring, decontamination procedures for personnel, work area and equipment, abatement methods and procedures.

Submit copies of the manufacturer's material safety data sheets for all products proposed for use on the Project.

Any laboratory performing AA (flame), TCLP, STLC or TTLC for the Contractor shall submit evidence of ELLAP and ELPAT certification and accreditation.

Submit copies of Leak test results for HEPA/ULPA equipment to the Engineer prior to starting Project site Work. Leak testing shall be performed at the Project site. The Leak test results shall identify equipment by make, model and serial number.

Submit emergency procedures including an emergency contact list; include name, phone number, fax number and pager number for Contractor's supervisor or competent person who can be reached on a 24-hour basis.

Submit a Lead Containing Paint Waste Disposal Plan that includes procedures for handling and disposal of lead waste material, estimated number of containers, size of container(s), hazardous material transporter name and disposal site before start of work.

Lead As-Built Summary

Submit a Lead As-Built Summary within 14 calendar days of the last day of field Work and prior to a request for payment. As-Built summary shall include hazardous material transporter name and disposal site. Include copy of Respirator Fit test, Medical Report, required Training Certificate of all who entered the containment and a copy of the sign in-out sheet.

Regulations

The Contractor shall comply with the most recent edition of applicable Federal, State, and local, standard laws, codes and regulations. If a conflict exists between referenced regulatory requirements and Contract Documents, the Contractor shall notify the Engineer in writing and request the conflict be resolved. Contractor performing Work contrary to mandated laws shall bear full legal and financial responsibility for the violations.

The list of regulators and regulations, cited below, serves as a reference for the most commonly used standards governing the lead industry:

FEDERAL REGULATORS AND REGULATIONS

a. EPA - Environmental Protection Agency
   (1) 40 CFR, Part 261 et al.- Resource Conservation and Recovery Act
   (2) Title X – Residential Lead Poisoning Prevention Act
   (3) National Ambient Air Quality Standards
b. OSHA - Occupational Safety and Health Administration
   (1) 29 CFR 1926.62 - Construction Standard
   (2) 29 CFR 1910.1025 - General Industry Lead Standard
   (3) 29 CFR 1910.147 - Lock Out - Tag Out
c. NESHAPS - National Emission Standards for Hazards Air Pollutants
   (1) 40 CFR 61, Subpart M - Lead Emissions
   (2) 40 CFR 61, Subpart B
d. DOT - Department of Transportation
   (1) 49 CFR 173, 178 and 179

STATE REGULATORS AND REGULATIONS

a. COSHA - California Department of Occupational Safety and Health
   (1) CCR, Title 8, Section 1532.1 - Construction Lead Standard
   (2) CCR, Title 8, Section 5216 – General Industry Lead Standard
   (3) CCR, Title 8, Section 5194 - Hazard Communication
   (4) CCR, Title 8, Section 5157 - Confined Space
   (5) CCR, Title 8, Section 3203 – Industry Illness Prevention
b. DTSC - Department of Toxic Substance Control
c. CCR, Title 22, Division 4, Sections 66000, et al
d. CIWMB - California Integrated Waste Management Board
e. California Department of Health Services (DHS)
f. CCR, Title 17, Division 1, Chapter 8
g. SWQCB - State Water Quality Control Board CCR, Title 23
h. CSLB - California State Licensing Board
i. Health and Safety Code 25157.8 (AB 2784 Natural Resources)

LOCAL REGULATORS AND REGULATIONS

a. Bay Area Air Quality Management District
   (1) Regulation 11, Rule 1

Notification and Permits

The Contractor is responsible for notifying Federal, State and local agencies, obtaining all required permits/extensions, and paying all related fees.

A Waste Manifest Form shall be completed by the Contractor and a copy submitted to the Engineer prior to the Contractor transporting hazardous materials from the work. All waste shall be sampled for TTLC, STLC, and TCLP lead prior to waste disposal. Provide copies of the laboratory results to the Engineer within three (3) days of receipt.

Experience and Workmanship

The Contractor performing the LBP abatement and demolition work shall use workers and supervisors accredited pursuant to Title 17, Code of California Regulations (CCR), Articles 5 and 7 and shall have a minimum of one (1) year of experience and a minimum of three (3) LBP removal projects or abatement work experience on projects similar in scope and size. Submit proof with bid.

Equipment

HEPA/ULPA vacuums and negative air machines must be leak tested on-site by a firm independent of the contractor.

Tools and equipment shall arrive at the Project site free of lead debris and dust.

HEPA/ULPA vacuum exteriors must be clean when they arrive on Project site. All openings on the vacuum or the hoses must be taped shut until ready for operation.

Power tools used to prepare painted surfaces must be connected to a HEPA/ULPA vacuum.

Heat Guns with a working temperature less than or equal to 1100 degrees Fahrenheit are permitted if the workers are fully trained and equipped to conduct Level I Trigger Tasks.

Execution

Safety

In accordance with State and Federal laws, Contractor shall be solely responsible for conditions at the Project site; including the safety of all persons and property during the performance of Work. To ensure effective communication in safety matters the Contractor shall participate and conduct the following meetings:

On the first day of lead field Work, the Contractor shall conduct a safety meeting (tailgate) for its employees which alerts them to the specific hazards of the Project. The Contractor must conduct the safety meeting in the primary language of its employees. If needed, more than 1 primary language presentation must occur.

On a weekly basis, the Contractor shall conduct a safety meeting with its employees.

Work Site Preparation

Prior to beginning any on-site Work preparation, the Contractor shall walk the Project area with the Engineer to discuss site characterization, regulated area set-up, access controls, background samples, security, and safety issues. Post all regulatory notices, permits, sign in-out roster and air sample results at the primary entrance to the Project site. The Contractor shall establish Project site control barriers.
The work area for LBP abatement will be set up with plastic barriers. Single layer of six (6) mil polyethylene plastic with Z-flap at entry/egress points and signs to identify the lead abatement area and required entry authorizations.

Work Site Control

The Contractor shall restrict the Work areas to authorized personnel; including, the Contractor's employees, Engineer, and regulatory agency representatives. All personnel including workers, entering the LBP abatement work area must record name, affiliation, time in and time out for each entry onto a log book. Access to the work area shall only be through a worker decontamination system(s) located at the work site.

At regulated Project sites, the Contractor shall use caution tape to demarcate the boundary of the Work zone and post lead warning signs.

Sign required by Title 8, CCR 1532.1:

WARNING: LEAD WORK AREA
POISON – NO SMOKING OR EATING

All hazardous waste containers containing LBP waste shall be located within the work site, be enclosed and locked at all times during non-working hours. All containers of hazardous materials shall be clearly labeled as containing hazardous materials.

If inclement weather threatens the Project site, the Contractor shall take all necessary measures to ensure lead-contaminated debris does not migrate from regulated areas.

If wind speed threatens the Project site, the Contractor shall erect a wind barrier or suspend operations until the wind is below 15 mph.

Recordkeeping

The Contractor shall maintain the following records at the regulated Work area:

1. Site Log (sign-in/sign-out).
2. Incident Log and Emergency Action Plan.
3. Personal air sampling results.
4. Air sample results from inside and outside the regulated area.
5. Lead Supervisor (Contractor) and Worker training certificates, fit tests, and medical clearance certificates.
6. Federal, state or local notifications.

All Items 1 through 6 shall be submitted with the "AS-Built" summary.

Engineering Controls

Negative Pressure Enclosure (NPE)

A negative pressure enclosure is required when LCM or PLCM is likely to trigger exposures >AL. If required, containment systems must comply with CCR 8, 1529. The negative air pressure enclosure can be achieved by means of a local exhaust system. The system shall be in compliance with ANSI Z9.2. It shall be in operation for 24 hours per day until decontamination and final clean-up of the work area is completed. Provide, maintain, and monitor per containment the pressure differential between the work area and the building outside of the work area with a monitoring device incorporating a continuous recorder (e.g. strip chart). Continuously maintain the work area at an air pressure that is lower than that in any surrounding space in the building, or at any location in the immediate proximity outside of the building. This pressure differential, when measured across any physical or critical barrier, must be capable of maintaining a minimum pressure differential of minus 0.02 inch water gauge in the work area relative to adjacent areas. Negative air pressure system units shall be employed in sufficient quantity to provide 4 air changes per hour in the workplace.

Removal Operations

The Contractor must have its Lead Related Construction Supervisor on-site during the removal of any lead.

Worker Protection

The following protective measures are required for lead-related Work associated with this Project:

1. Employee Training/Supervision
   a. The Contractor shall provide information to its employees about lead and other

hazards per the Hazard Communication standard (8 CCR, 5194).

b. An accredited DHS course provider must train lead abatement workers and supervisors. Lead abatement workers shall have, at a minimum, 3 days of training. Lead abatement supervisors shall have, at a minimum, 5 days of training.

2. Respiratory Protection
   a. The Contractor shall provide respiratory protection to all employees where there is the potential for exposure to lead dust at or above the permissible exposure limit. Respiratory protection shall be provided at no cost to the Contractor's employees. It is anticipated that the minimum respiratory protection required for this project is a negative pressure, half mask, air purifying respirator, equipped with HEPA filters for airborne lead levels not in excess of 0.5 mg/m^3 (10 x PEL). For airborne lead levels not in excess of 2.5 mg/m^3 (50 x PEL), a full facepiece air purifying respirator, with HEPA filters will be required. For airborne lead levels exceeding 50 mg/m^3 (1000 x PEL), a pressure demand, full facepiece, supplied air respirator will be required.
   b. The Contractor's employees who wear a respirator must have passed a fit test within the previous 12 months to perform contract work. They must also be properly trained in the care, use, and maintenance of respirators.
   c. Lead Abatement supervisor and employees shall be DHS Certified.
3. Protective Clothing
   a. The Contractor shall provide workers and authorized visitors with sufficient sets of protective clothing.
   b. The Contractor shall provide workers with full body disposable Tyvek suits, rubber or latex gloves, rubber boots, eye protection, earplugs and hard hats as needed per the 8 CCR, Hazard Communication and Personal Protection Equipment Standards. Disposal suits shall be used once, then properly discarded.
4. Medical Surveillance
   a. As required by 8 CCR 1532.1, the Contractor shall establish a medical surveillance program for all employees performing Lead Work. The LBP workers must have initial (not greater than 30 days prior to the worker starting on the project) blood lead level and zinc protoporphyrin screening determined by the whole blood lead method, utilizing vena-puncture technique.
   b. The Contractor shall provide copies of the physician's written opinion for each employee performing lead work.
   c. All of the Contractor's Lead Workers and supervisors must pass the medical examinations.

Personal Hygiene

The Contractor shall require that no employee be allowed to apply cosmetics, consume food, tobacco products, or beverage in the regulated Work area. All workers must wash hands and face upon leaving work area for breaks and lunch and shall shower at the end of the work shift. Wash facilities that includes running potable water, towels, and a HEPA vacuum, will be provided by the Contractor.

Air Monitoring Program

a. Initial Determination- The Contractor shall conduct an initial determination of the worker lead exposures as required by the Cal/OSHA Construction Lead Standard [Title 8 CCR 1532.1 (d)]. All Contractor and subcontractor employee categories shall be included in the exposure monitoring and shall be representative of a full shift including at least one sample for each job classification in each work area either for each shift or for the shift with the highest exposure level. Full shift personal samples shall be representative of the monitored employee's regular daily exposure to lead. The results of the initial determination shall be used to establish the degree of engineering, administrative and respiratory protection controls.

b. Periodic Exposure Monitoring- Notwithstanding the results of the initial determination, the Contractor shall conduct daily employee exposure monitoring of not less than ten (10) % of the Contractor's employees. Daily monitoring of the Contractor's employees shall be performed to enable each employee's exposure to be reasonably represented by at least one full-shift air samples. The minimum frequency of the exposure monitoring shall be maintained based on employee exposure levels, as required by Title 8 CCR 1532.1.

c. Area Monitoring- A minimum of two (2) air samples shall be collected: one (1) inside the designated work area and one (1) outside the work area.

d. Materials and Laboratory Analysis- Portable calibrated low-flow pumps will be used to draw a known volume of air through a 37 millimeter diameter, 0.8 micron MCE filter. Samples will be analyzed for lead by an AIHA accredited laboratory pursuant to the NIOSH 7300 method to yield a weight-per-unit volume (mg/m^3). All samples shall be delivered to the laboratory for a 24 hour turn-around time analysis at the completion of each work day.

Specific Work Protocols

Approved work plan will identify Contractor's specific work protocols for each different type of worker work method.

Initial Site Clean-Up

Contractor shall outline extent of precleaning in the work plan.

Abatement/In-Place Management

Establish a regulated area with barrier tape, warning sign at all possible entrances and visual barriers. Set up cleaning stations for personnel as required.

Contain liquid and dry lead containing waste for interior and exterior job sites. The use of NPE's is governed by COSHA standards.

Remove peeling, flaking or blistered paint with paste strips, paint remover, wet sanding, wire brushes heat guns, HEPA equipped sanders or other methods as outlined in the OSHA Worker Protection Standards.

Dry blasting LCM is not permitted except by special circumstances pre-approved by Engineer.

The following abatement alternatives are included in the event they may be necessary and available for the contractor to use.

a. Machine sander- Sanders shall be of the dual action, rotary action, orbital or straight line system type, capable of being fitted with a HEPA dust pick-up system. Air compressors utilized to operate this equipment shall be designed to continuously provide 90 to 110 psi or as recommended by the manufacturer. Sanding shall only be done on flat surfaces which allow the HEPA dust collection hood to come into tight contact with the surface being sanded. Surfaces to be sanded shall be wide enough to allow maximum efficiency of the HEPA dust collection system. All LBP shall be removed down to the bare substrate surface. In cases in which some pigment may remain embedded in wood grain and similar porous substrate, care shall be taken to avoid damage to the substrate with the sanding machine.

b. Demolition of building structures- The demolition of intact building structures will be done in such a manner to control the spread of dust created during the process. The paint chips and dust with paint chips generated during this type of work shall be collected and disposed as hazardous waste. Manual demolition or heavy equipment can be used.

c. Heat gun removers- Electrically-operated heat-blower gun shall be a flameless electrical paint softener type. Heat-blower shall have electronically controlled temperature settings to allow usage below a temperature of 700 degrees Fahrenheit. Heat-blower shall be GFI type (non-grounded) 120V, AC application. Heat-blower shall be equipped with various nozzles to cover all common applications (cone, fan, glass protector, spoon reflector, etc). The hot air stream from the heat-blower gun shall be directed at the painted surface and the paint allowed to blister and soften. Considerable amount of lead is volatilized from lead-based paint and lead fumes are released at approximately 700 degrees Fahrenheit. Respiratory protection is required of all persons in the work area. Softened paint shall be removed down to the substrate surface as completely as possible by scraping and/or brushing. In cases where some pigment may remain embedded in plaster and similar porous substrate, care shall be taken to avoid damage to the substrate with the scraping or brushing.

d. HEPA vacuum power tool cleaning- Power tool cleaning involves the use of an air compressor to power the sanding, impacting (needle gun), grinding, or brushing equipment in order to remove all paint, rust, and mill scale on metal and irregular surfaces. When surfaces are flat and the tool is used properly, dust generation is minimal. Dust will escape in areas of complex configuration when an adequate seal between the tool and the surface cannot be maintained. Proper shroud for the shape of the surface to be treated shall be used. Containment shall consist of a tarp or wind screen to isolate the work area and ground covering of 10 mil plastic.

Inspections

Inspection Responsibilities – Contractor

Prior to beginning any lead-related Work, the Contractor's supervisor shall inspect the regulated Work areas for any building damage, hazardous conditions, and/or irregularities that may contribute to an unsafe Work environment. Any condition that poses a hazard or potential hazard to the Contractor's employees must be immediately reported to the Engineer.

The Contractor is responsible for monitoring and enforcing all requirements of this specification.

Final Clean-Up

Clean and remove all equipment and supplies. Plastic sheeting shall be carefully folded and placed in a 6 mil plastic bag and sealed for disposal.

Waste Disposal

Packaging Lead Waste

1. All lead containing waste material must be packaged in a safe and legal manner. All contaminated clothing used during lead abatement and cleanup work shall be placed in plastic bags for disposal.

Labeling Lead Waste

1. Each package of waste shall have a label affixed with the following information:
2. Hazardous Waste warning;
3. Generator's Name, address, and phone number;
4. Manifest document number, and date.

Storing Lead Waste

At the end of each shift, all lead waste shall be stored in a lockable container or shipped off site. Accumulated waste shall not be allowed to remain in the regulated Work area overnight.

Transporting Lead Waste

A registered waste transporter, hired by the Contractor, is responsible for transporting hazardous lead waste to an EPA certified disposal facility.

Disposal

1. The Contractor shall provide Weigh Master weight slips as verification of the weight and proper disposal of site, to the Engineer within 45 days of each container disposal.

2. Lead waste that has been contaminated with another hazardous waste (e.g. solvents) must be tested and disposed according to the standards of the greater hazard.

3. Lead containing liquid waste must be filtered and/or pretreated to meet Santa Clara Water Pollution Control Plant standards to be disposed in the sewer system. Contractor will be responsible for all costs associated with any required testing and all costs associated with filtration or pretreatment.

4. Contractor shall obtain a permit from Santa Clara Water Pollution Control Plant prior to any discharge to the sewer system.

5. All waste with total lead greater than 350 ppm (mg/kg) disposed of in California, must be disposed of at a Class 1 Hazardous waste landfill, or at other landfills that have specific permits to accept these wastes. However, the wastes are not classed as hazardous wastes unless for another reason. The California hazardous waste threshold for total lead is 1,000 ppm and the soluble threshold concentration (STLC) for lead is 5 ppm.

Disposal of Waste Water

Water used for showering in the decontamination area and any other lead-contaminated water must be filtered prior to disposal into the existing sewer system. The system shall at a minimum contain a 3-

stage filtering system with a 5.0 micron filter. The filtration system shall be adequate to meet the lead discharge limitations of the local publicly-owned treatment works.

Recordkeeping

The Contractor shall provide the Engineer with copies of all lead waste disposal documents.

Fees

The Contractor is responsible for all fees and charges related to lead waste transport and disposal operations; including, waste steam profiles. Refer to SW-846-1311 (TCLP), (TTLC), and CCR, Title 22 Section 66261 (STLC) for waste stream identification requirements.

Emergency Planning

Emergency planning and procedures shall be presented in the Work Plan submitted by the Contractor. All employees must read emergency procedures and sign to acknowledge receipt and understanding of work site layout, location of emergency exits and emergency procedures. Emergency planning shall include considerations of fires, explosions, toxic atmospheres, electrical hazards, loss of electrical power, slips, trips, and falls, confined spaces and heat related injuries. Employees shall be trained in evacuation in the event of workplace emergencies. Emergency telephone numbers shall be prominently posted in the employee change area and Contractor's office.

Project Close Out

Before payment is issued to the Contractor the following information shall be provided to the Engineer:

a. Contractor's name, address, CSLB certification number, DOSH registration number, and tax identification number.
b. Name of hazardous materials transporter, address, phone number and registration number
c. ELAP laboratory name(s), address(es), and phone number(s) used to perform AA (flame), TCLP, TTLC or STLC.
d. Provide an inventory of the LCM/PLCM removed from the Project site.
e. Number of employees who worked on the Project.
f. Date on-site Work began.
g. Date on-site Work was completed.
h. Work methods
i. Name, address, phone number and EPA registration number of waste disposal site.
j. Copies of Weigh Master tickets for hazardous material.

Measurement and Payment

All costs required for Hazardous Materials Management - Lead shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, equipment, testing, transportation, disposal and materials specified in this section and as directed by the Engineer.

END OF SECTION

E-15 HAZARDOUS MATERIALS MANAGEMENT- MISCELLANEOUS

General

Miscellaneous wastes on site shall be disposed of or recycled at an appropriate recycling facility prior to structure demolition. Removal and disposal or recycling of hazardous wastes and other contaminated materials shall comply with all regulations and these specifications.

Scope of Work

The Contractor shall furnish all labor, material, equipment, services, testing, employee training, transportation, and daily expense to meet the requirements of this Specification.

The Contractor shall obtain all required permits, licenses, registrations, notifications, and regulatory approvals required by law (federal, state and local).

Contractor shall remove and legally dispose or recycle all hazardous and possibly hazardous materials on site. A list of hazardous or possibly hazardous material includes, but is not limited to those items shown in Table 1. All quantities listed in Table 1 should be considered approximate; the contractor is responsible for verifying all quantities. Contractor shall disclose any additional hazardous substances exposed during the work to the Engineer prior to disposal or recycling.

Site Characterization

A site review was recently conducted and various hazardous and possibly hazardous materials were identified on the site. Contractor shall make his/her own determination regarding safe and legal disposal of all such materials. Hazardous and possibly hazardous materials other than lead and asbestos identified during the site review include, but are not limited to, those items listed in Table 1 below. Table 1 shall not be used for pricing purposes. Refer to the drawings for the approximate locations of some of these materials requiring abatement and/or demolition. See the Sludge, Soil and Water Quality Evaluation and Asbestos Survey, included in the Information Available to Bidders.

Table 1. Miscellaneous Hazardous and Possibly Hazardous Materials

Location	Material Description
Blacksmith Shop	Lead impacted asphalt, lead based paint chips, partially full paint cans, container of ethylene glycol, spray can B12 chem-tool, hand cleaner, pine sol containers, sunlight detergent.
Residential House	Asbestos vinyl floor sheeting, transite flue pipes, Pool chlorine tablets, pool clarifying solution.

Table 1. Miscellaneous Hazardous Materials, cont'd

Known hazardous materials, other than those in Table 1, that have the potential to be disturbed at this Project site are listed in Sections E13 and E14.

Submittals

Submit in accordance with Section C-22.

Submit copies of all regulatory agency notifications and permits.

Submit a Waste Disposal Plan that includes estimated number of containers, size of container(s), hazardous material transporter name and hazardous material disposal site before start of work.

Submit a Hazardous Waste As-Built Summary within 14 calendar days of the last day of field Work and prior to application for payment. As-Built summary shall include hazardous material transporter name and disposal site.

Regulations

The Contractor shall comply with the most recent edition of applicable Federal, State, and local, standard laws, codes and regulations. Contractor performing Work contrary to mandated laws shall bear full legal and financial responsibility for the violations.

Notification and Permits

The Contractor is responsible for notifying Federal, State and local agencies, obtaining all required permits/extensions, and paying all related fees.

A Waste Manifest Form shall be completed by the Contractor and a copy submitted to the Engineer prior to the Contractor transporting hazardous materials from the work.

Execution

Safety

In accordance with State and Federal laws, Contractor shall be solely responsible for conditions of the Project site; including the safety of all persons and property during the performance of Work.

Waste Disposal

Packaging and Labeling Waste

Hazardous waste shall be package and labeled as required by federal, state and local regulations.

Transporting Waste

A registered waste transporter, hired by the Contractor, is responsible for transporting hazardous waste to a certified disposal facility.

Disposal

The Contractor shall provide Weigh Master weight slips and verification of the weight and proper disposal of site, to the Engineer within 45 days of each container disposal. Contractor is responsible for all testing required by the disposal facility.

Recordkeeping

The Contractor shall provide the Engineer with copies of all waste disposal documents.

Fees

The Contractor is responsible for all fees and charges related to waste transport and disposal operations; including, waste stream profiles.

Project Close Out

Before the final certificate for payment is issued to the Contractor the following information shall be provided to the Engineer:

a. Contractor's name, address, and tax identification number.
b. Name of hazardous materials transporter, address, phone number and registration number.
c. An inventory of the hazardous waste removed from the Project site.
d. Date on-site Work began.
e. Date on-site Work was completed.
f. Work methods.
g. Name, address, phone number and EPA registration number of waste disposal site.
h. Copies of Weigh Master tickets for hazardous material.

Measurement and Payment

All costs required for Hazardous Materials Management - Miscellaneous shall be included as a Lump Sum Price. The Lump Sum price shall include full compensation for furnishing all labor, testing, transportation, disposal, equipment and materials specified in this section and as directed by the Engineer.

END OF SECTION

APPENDIX A

INFORMATION AVAILABLE TO BIDDERS

APPENDIX A - INFORMATION AVAILABLE TO BIDDERS

REFERENCE DOCUMENTS

Information Available to Bidders includes the reference documents noted below.

Project Demolition Plans by SCS Engineers dated September 6, 2005

Asbestos and Lead-Based Paint Investigation, former Blacksmith Shop, 116 North Main Street, Milpitas, California by SCS Engineers dated September 2005.

Asbestos and Lead-Based Paint Investigation, Single-Family Residence, 86 North Main Street, Milpitas, California by SCS Engineers dated September 2005

NORTH MAIN STREET DEVELOPMENT PROJECT

Historic Blacksmith Shop and Residence Demolition

116 & 86 N Main Street

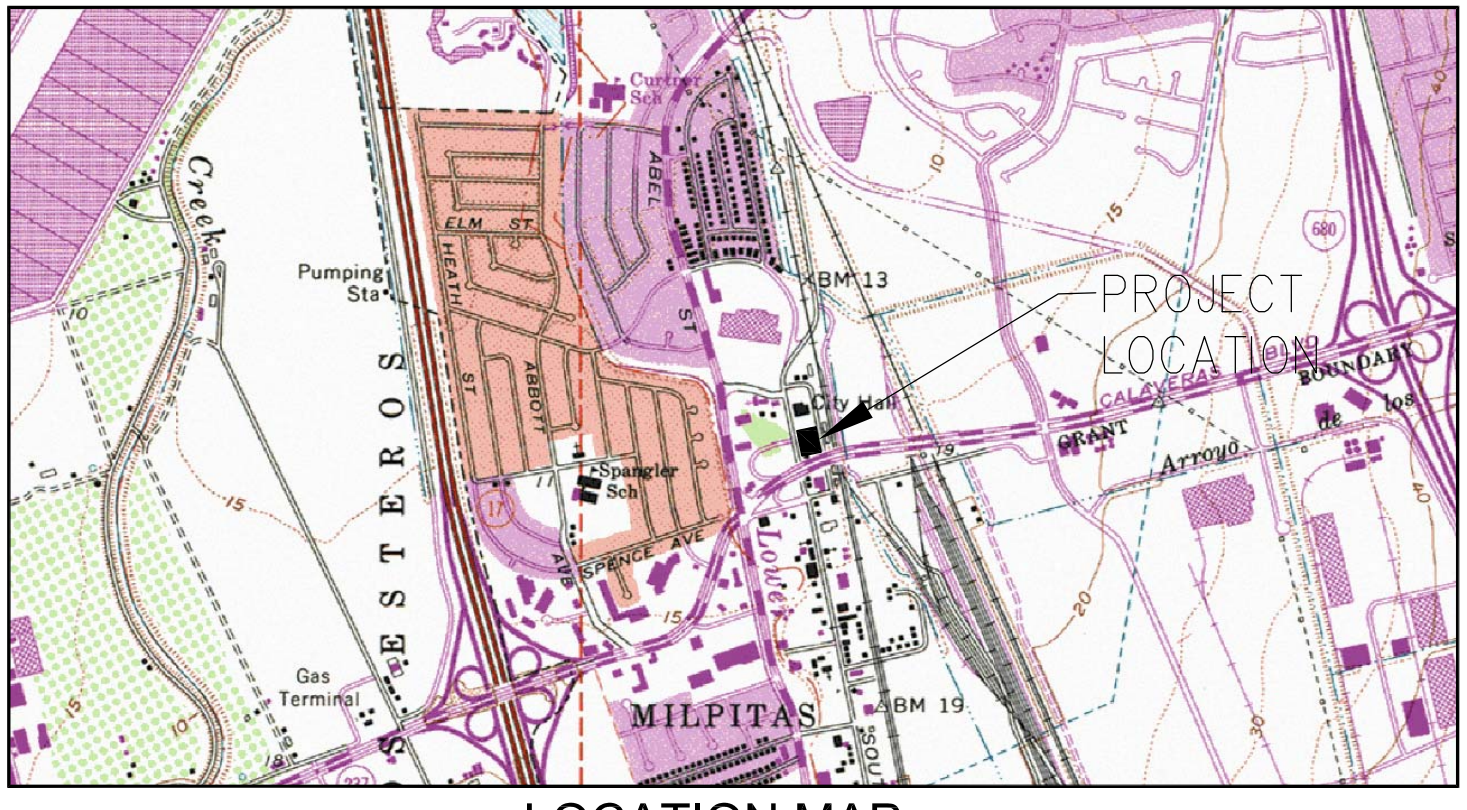
Milpitas, California

for

City of Milpitas

455 E. Calaveras Boulevard

Milpitas, California



LOCATION MAP

N.T.S.

LEGEND

1. TITLE SHEET
2. SITE PLAN
3. SALVAGE PLAN
4. DEMOLITION PLAN

SCS ENGINEERS

ENVIRONMENTAL CONSULTANTS & CONTRACTORS

6601 KOLL CENTER PKWY, SUITE 140
PLEASANTON, CA 94566
PH. (925) 426-0080 FAX. (925) 426-0707

PROJ. NO.	DWN. BY:	ACAD FILE:
01205098.05	CRD	Fig. 01 Title Sheet.dwg
DSN. BY:	CHK. BY:	APP. BY:
LDL	LDL	L. LONG

SHEET TITLE: TITLE SHEET

PROJECT TITLE: NORTH MAIN STREET DEVELOPMENT PROJECT HISTORIC BLACKSMITH SHOP AND RESIDENCE DEMOLITION MILPITAS, CALIFORNIA

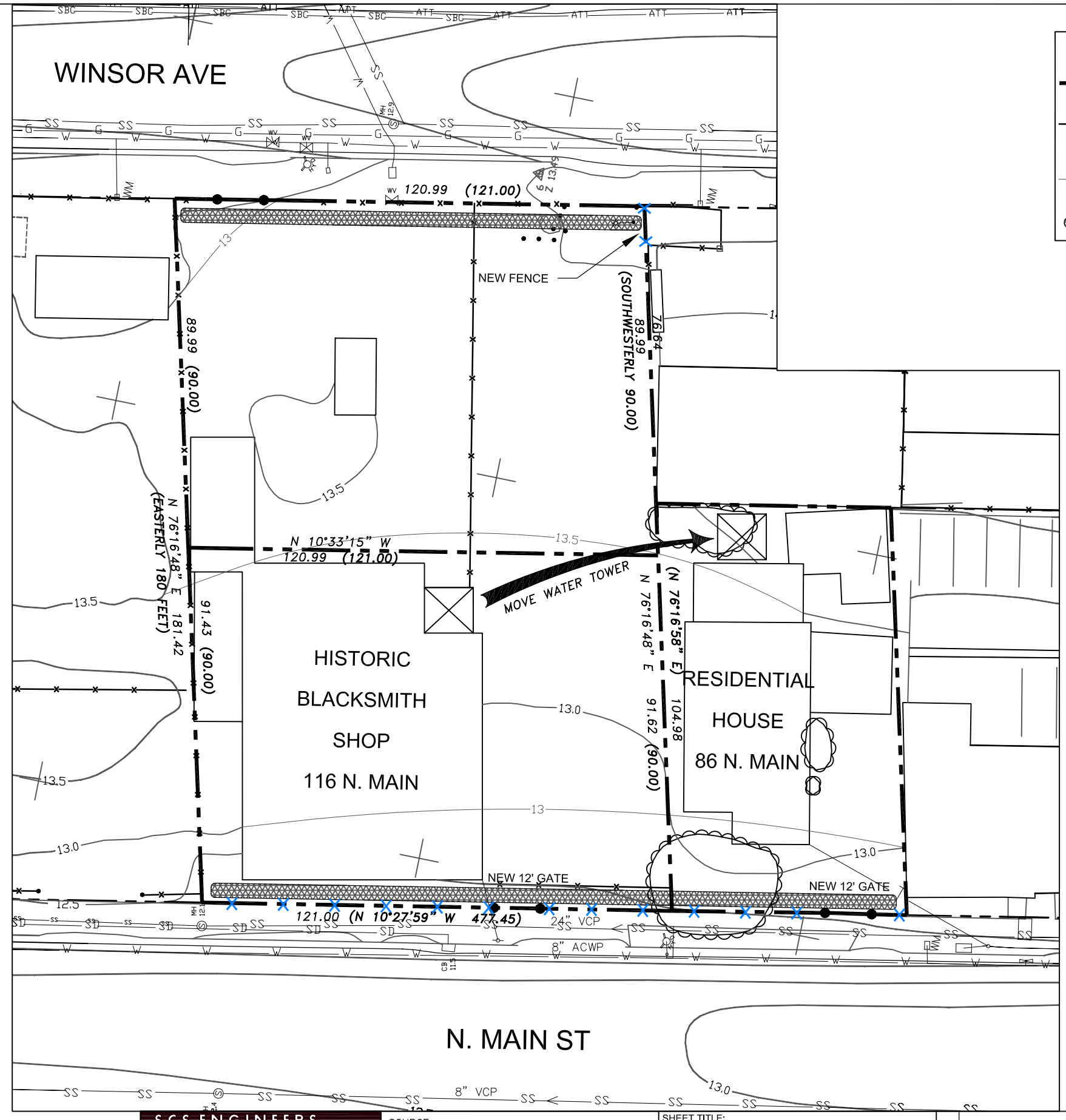
NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — LESLIE D. LONG — No. 30637 — Exp 3/06 — CIVIL — STATE OF CALIFORNIA

DATE: 9/6/05

SCALE: AS SHOWN

FIGURE NO. 1



NOTES:

1. ALL UTILITIES ARE APPROXIMATELY LOCATED.
2. US ALERT AND PRIVATE UTILITY SURVEY REQUIRED BEFORE DIGING.

SCALE IN FEET

30 0 30

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS & CONTRACTORS
6601 KOLL CENTER PKWY, SUITE 140
PLEASANTON, CA 94566
PH. (925) 426-0080 FAX. (925) 426-0707

PROJ. NO.	DWN. BY:	ACAD FILE:
01205098.00	CRD	Fig_02_Site_Plan.dwg
DSN. BY:	CHK. BY:	APP. BY:
LDL	LDL	L. LONG

SOURCE:
CROSS LAND SURVEYING, INC.
2210 MT. PLEASANT ROAD
SAN JOSE, CA 95148
(408) 274-7994
SURVEYED OCTOBER, 2003

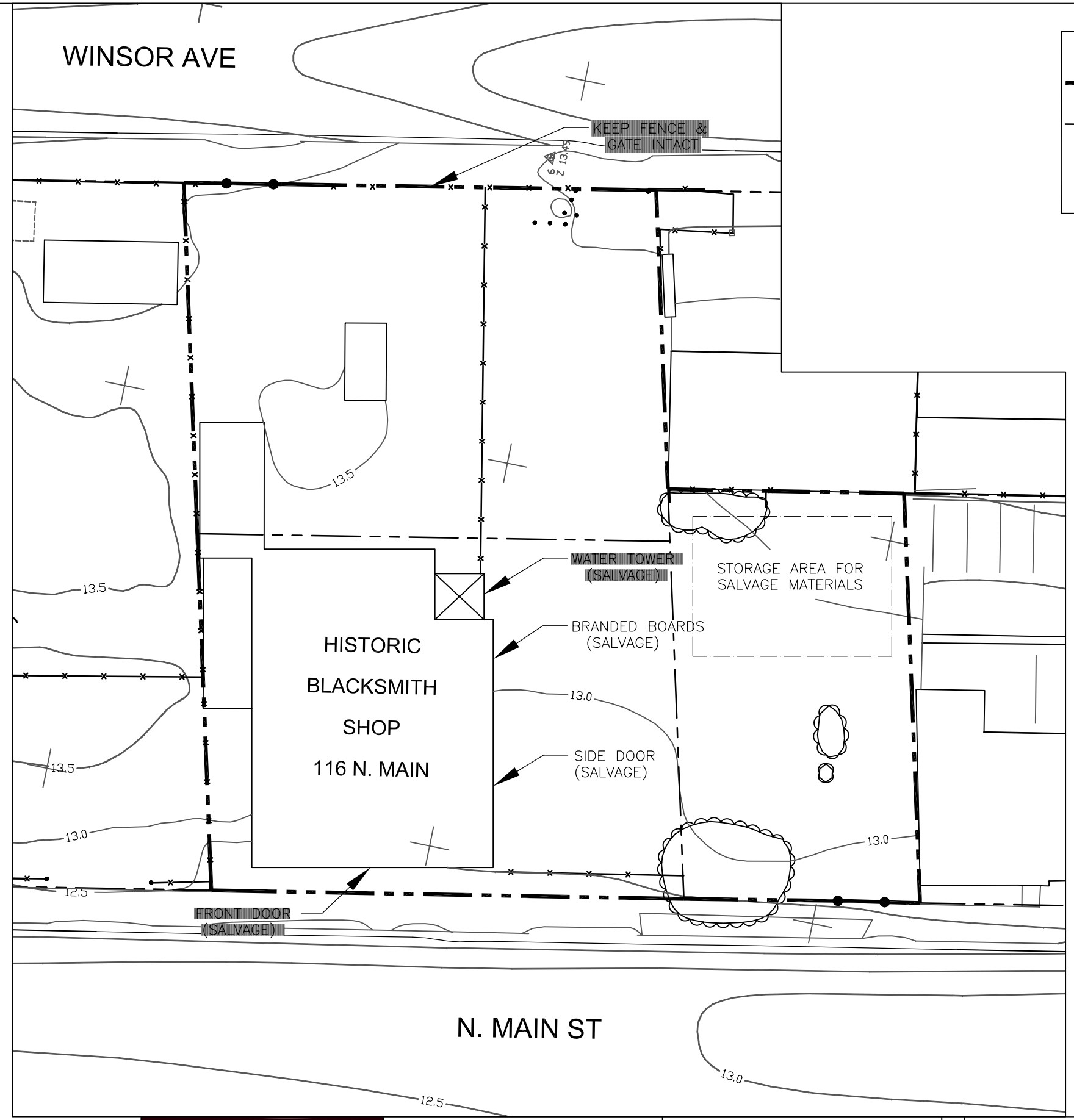
SHEET TITLE: SITE PLAN

PROJECT TITLE:
NORTH MAIN STREET DEVELOPEMENT PROJECT
HISTORIC BLACKSMITH SHOP AND
RESIDENCE DEMOLITION
MILPITAS, CALIFORNIA

NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER LESLIE D. LONG No. 30637 Exp 3/06 CIVIL STATE OF CALIFORNIA

DATE: 9/6/05
SCALE: 1" = 30'
FIGURE NO. 2



SCALE IN FEET

30 0 30

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS & CONTRACTORS
6601 KOLL CENTER PKWY, SUITE 140
PLEASANTON, CA 94566
PH. (925) 426-0080 FAX. (925) 426-0707

PROJ. NO.	DWN. BY:	ACAD FILE:
01205098.00	CRD	Fig_03_Salvage.dwg
DSN. BY: LDL	CHK. BY: LDL	APP. BY: L. LONG

SOURCE:
CROSS LAND SURVEYING, INC.
2210 MT. PLEASANT ROAD
SAN JOSE, CA 95148
(408) 274-7994
SURVEYED OCTOBER, 2003

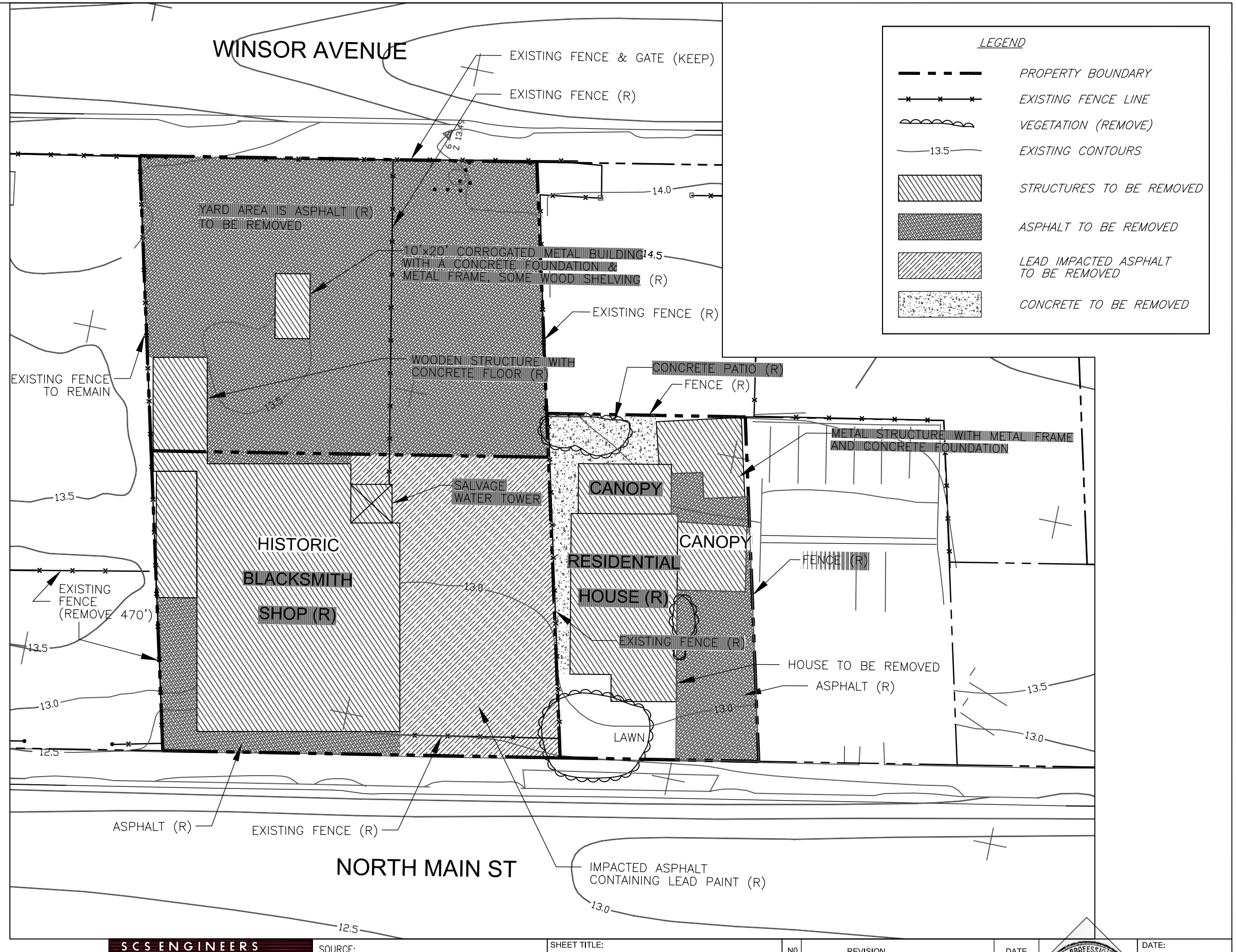
SHEET TITLE: SALVAGE PLAN

PROJECT TITLE:
NORTH MAIN STREET DEVELOPEMENT PROJECT
HISTORIC BLACKSMITH SHOP AND
RESIDENCE DEMOLITION
MILPITAS, CALIFORNIA

NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
LESLIE D. LONG
No. 30637
Exp 3/06
CIVIL
STATE OF CALIFORNIA

DATE: 9/6/05
SCALE: 1" = 30'
FIGURE NO. 3



SCALE IN FEET

30 0 30

SCS ENGINEERS	SOURCE:
ENVIRONMENTAL CONSULTANTS & CONTRACTORS	**CROSS LAND SURVEYING, INC.**
6601 KOLL CENTER PKWY, SUITE 140	**2210 MT. PLEASANT ROAD**
PLEASANTON, CA 94566	**SAN JOSE, CA 95148**
PH. (925) 426-0080 FAX. (925) 426-0707	**(408) 274–7994**
PROJ. NO: 01205098.00 | DWN. BY: CRD | ACAD FILE: Fig_04_Demo_Proj.dwg	**SURVEYED OCTOBER, 2003**
DSN. BY: LDL | CHK. BY: LDL | APP. BY: L. LONG	

SHEET TITLE: DEMOLITION PROJECT

PROJECT TITLE: NORTH MAIN STREET DEVELOPEMENT PROJECT HISTORIC BLACKSMITH SHOP AND RESIDENCE DEMOLITION MILPITAS, CALIFORNIA

NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER LEONARD D. LONG No. 30637 Exp 3/06 CIVIL STATE OF CALIFORNIA

DATE: 9/6/05

SCALE: 1" = 30'

FIGURE NO. 4

ASBESTOS AND LEAD-BASED PAINT INVESTIGATION
FORMER BLACKSMITH SHOP
116 NORTH MAIN STREET
MILPITAS, CALIFORNIA

Prepared For:

City of Milpitas
455 East Calaveras Boulevard
Milpitas, California 95035-5411
(408) 586-3409

Prepared By:

SCS Engineers
3900 Kilroy Airport Way, Suite 100
Long Beach, California 90806
(562) 426-9544

September 2005
File No. 01205098.08

CONTENTS

ASBESTOS AND LEAD-BASED PAINT INVESTIGATION
FORMER BLACKSMITH SHOP
116 NORTH MAIN STREET
MILPITAS, CALIFORNIA

1.0 EXECUTIVE SUMMARY

SCS Engineers (SCS) was retained by the City of Milpitas to conduct an asbestos and lead-based paint investigation of a commercial structure located at 116 North Main Street, Milpitas, California. It is our understanding that this former blacksmith shop will be demolished as part of a redevelopment effort (City of Milpitas Public Library Project). Mr. Udo Steinberger of SCS conducted a walk-through inspection of the residence on August 5, 2005.

The Property is bounded on the north by City Property (former grammar school), to the west by North Main Street, to the south by a single-family residence, and to the east by Winsor Street/Avenue.

Asbestos Survey

No asbestos was detected within samples of building materials collected from the blacksmith shop. A detailed description of building materials sampled is provided in Table 1.

Lead-Based Paint Survey

Results of the limited lead-based paint survey indicated that lead was present at concentrations that exceed the California Occupational Safety and Health Administration (Cal-OSHA) guideline of 600 parts per million (ppm) in five (5) out of six (6) paint samples collected from flaking paint systems:

- South exterior wall
- South exterior window sills
- South sliding door
- East door
- South storage yard/driveway (paint atop pavement)

OSHA asbestos consultant certification (C.A.C.) and AHERA accreditation numbers for the inspector who performed the site investigation are:

Udo G. Steinberger: Certification No: 98-2491
AHERA Accreditation No: RBI-16098

2.0 INTRODUCTION

SCS was retained by the City of Milpitas to conduct an asbestos and lead-base paint investigation of a commercial structure located at 116 North Main Street in Milpitas, California. The structure inspected has been scheduled to be demolished for the proposed Milpitas Public Library Project.

The objective of this investigation was to identify asbestos-containing building materials (ACBMs) within the structure and characterize flaking paint systems for the presence of lead. The investigation consisted of an inspection of the structure as well as sampling and analysis of suspect building materials for asbestos content. This report presents observations and results of the investigation. This investigation is based on the assumption that the structure will be demolished. SCS should be contacted for additional recommendations in the event that this building is renovated and/or remains in place.

This report has been specifically prepared for use and reliance by the City of Milpitas with application to a survey for ACBMs and lead-based paint of a structure located at **116 North Main Street,** as part of the proposed Milpitas Public Library Project. This report has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, either expressed or implied, is made as to the opinions presented herein. No other party, known or unknown to SCS, is intended as a beneficiary of this work product, its content, or information embedded therein. Third parties use this report at their own risk. SCS assumes no responsibilities for the accuracy of information obtained, compiled, or provided by others.

3.0 SITE INFORMATION AND BUILDING INSPECTION

This one-story building was of typical wood-frame construction and built on a raised concrete foundation. A wooden shed was attached to the east shop wall. The structure was abandoned and reportedly constructed in the 1920's. It appeared to be in generally poor condition at the time of inspection.

Exterior walls and interior load bearing walls consisted of wood. Interior partition walls as well as some ceilings were covered with drywall materials. Floor areas consisted of bare concrete.

The main building roof was slightly pitched and covered with tar and gravel. The roof of the attached shed was pitched and covered with composite asphalt shingles overlaying wood shingles.

4.0 SAMPLING OF SUSPECT BUILDING MATERIALS

A walk-through of the structure was conducted on August5, 2005 by Mr. Udo Steinberger of SCS, an OSHA-certified California asbestos consultant (CAC 98-2491). Mr. Steinberger was assisted by Mr. Ted Sison of SCS. Access to the building was arranged by Mr. Jorge Bermudez,, of the City of Milpitas. A total of five bulk samples were collected from the structures for laboratory asbestos analysis. The following suspect building materials were sampled:

- Drywall materials
- Window putty
- Roofing shingles

Each sample of drywall, window putty, and roofing material was prepared by collecting materials from several locations and compositing them into a single sample. Therefore, the number of samples collected was judged sufficient to provide adequate characterization of these materials. The bulk Sample Summary Log attached in Appendix A provide a description and identify locations of all samples collected from this structure.

During the investigation, six (6) paint systems were observed to be in deteriorated condition (i.e., flaking). Therefore, one composite sample of each paint system was collected for lead-based paint characterization.

5.0 ANALYTICAL RESULTS

Asbestos Survey

Bulk samples collected from the structure during this inspection were delivered to MACS Lab Inc., a NVLAP (National Voluntary Laboratory Accreditation Program) accredited laboratory for analysis of asbestos content. Bulk samples were analyzed for asbestos using Polarized Light Microscopy (PLM) and Dispersion Staining in accordance with the United States Environmental Protection Agency (EPA) Interim Method for the Determination of Asbestos in Bulk Samples (40 CFR 763, Subpart F, Appendix A).

Analytical results indicate that none of the samples of suspect building materials collected contained asbestos at concentrations greater than one percent. Analytical results are summarized in Table 1, with the laboratory report provided in Appendix A.

Lead-Based Paint Survey

Results of the limited lead-based paint survey indicated that lead was present at concentrations that exceed the Cal-OSHA guideline of 600 parts per million (ppm) in five (5) out of six (6) paint samples collected from flaking paint systems:

- South exterior wall
- South exterior window sills
- South interior sliding door surface
- East door interior surface
- South storage yard/driveway (paint atop pavement)

The laboratory report for lead-based paint analysis is provided in Appendix B.

6.0 LOCATION AND ESTIMATED QUANTITIES OF LEAD-BASED PAINT

All paint systems within the building (except beige paint system in interior office) should be considered to contain lead-based paint. The paint systems listed below are those that were observed to be flaking:

- Exterior surfaces – 5,000 square feet (sq ft)
- South exterior window sills - (included in above estimate)
- South sliding door: exterior surfaces - (included in above estimate)
- North door: interior surfaces – 200 sq ft
- South sliding door: interior surfaces - 200 sq ft
- East (rear) doors: interior surfaces - 500 sq ft
- West (front) doors: interior surfaces – 400 sq ft
- South exterior storage area (paint atop asphalt pavement) – 4,000 sq ft

7.0 CONCLUSIONS

Asbestos Survey

The following conclusions are based both on observations of potential ACBMs during the building inspection and on analytical results. By federal definition (Environmental Protection Agency/NESHAPS - 40 CFR 61 Part M), any substance that contains more than one percent asbestos is classified as an asbestos-containing material (ACM). Within the State of California, Cal-OSHA defines an asbestos-containing construction material as being any material used in building construction containing greater than one percent (1.0%) asbestos. Materials other than construction materials are regulated at greater than one tenth of one percent (0.1%) asbestos.

None of the samples collected and analyzed contained asbestos in detectable concentrations. This report and analysis represent a limited characterization of asbestos materials within the subject structure. Not all of the suspect materials were sampled within each room or common area. the two Only a representative number of samples were collected from suspect materials within each homogeneous area regardless of the number of areas it was observed in. In addition, no attempt was made to provide a valid statistical approach to completely characterize all of the asbestos within all of the structures. Note that additional ACBMs may be present within wall or attic spaces, plenums, mechanical systems, etc. that were not accessible during this inspection. Prior to and/or during renovation activities, any suspect building material not characterized during this inspection should be sampled and analyzed for asbestos content.

Lead-Based Paint Survey

Cal-OSHA guidelines (Title 8, California Code of Regulations, Section 1532.1) are applicable to occupational exposures to potential lead-containing materials during renovation/demolition activities. Cal-OSHA guidelines indicate that coatings or materials containing lead at concentrations equal to or exceeding 0.06 percent by weight or 600 mg/kg (milligrams per kilogram, equivalent to parts per million [ppm]) constitute a health hazard to employees engaged in lead-related construction work. Poisonings may occur if workers or visitors ingest lead–based paint and/or inhale dust from lead-based paint.

Based on analytical results, lead at concentrations that exceed the Cal-OSHA guideline of 600 ppm is present in 5 out of 6 paint systems sampled. Contractors involved in renovation/demolition activities should be informed of the presence of and potential health hazards associated with lead-based paint. Care should be taken to protect workers (i.e., respiratory protection) when disturbing lead-based paint during renovation/demolition activities.

8.0 RECOMMENDATIONS

The following recommendations are provided for ACBMs identified within the subject structures. Recommendations are based on observations, laboratory analysis, and on the assumption that the structures may be demolished in the near future:

Asbestos Survey

(No ACBMs identified)

Lead-Based Paint Survey

Contractors involved in renovation/demolition activities should be informed of the presence of lead-based paint. As with all demolition projects, contractors must adhere to lead-in-construction work practices regardless of the lead concentrations (i.e., worker respiratory protection). If lead-based paint-specific abatement activities are scheduled, they should be completed by a Department of Health Services (DHS) certified lead-based paint abatement contractor. In addition, guidance issued by the United States Environmental Protection Agency in July 2000 allows contractors to dispose of demolition debris containing lead-based paint as household waste. Therefore, there are no restrictions that apply to the disposal of debris resulting from the demolition of this structure. However, care should be taken to prevent dispersion of lead-based paint during building demolition (i.e., minimize fugitive dust emissions).

TABLES

TABLE 1. ASBESTOS ANALYTICAL RESULTS
(116 North Main Street, Milpitas)

Sample Number	Sample Location	Sample Type Description	Friability	Material Condition	Asbestos Content*	Asbestos Type
23467	Building Interior: Central office - south wall	Drywall Materials - White (composite)			ND	
23468	Building Interior: North central office - S/W walls	Drywall Materials - Off white (composite)			ND	
23469	Building Interior: Central office - ceiling	Drywall Materials - Off white (composite)			ND	
23470	Building Interior: Loft - roof window	Window Putty - Off white (composite)			ND	
23471	Shed: Roof area - southeast corner	Roofing shingles - Gray (composite)			ND	

ND = None detected
* Asbestos content determined by Polarized Light Microscopy (PLM) with dispersion staining as recommended by the Environmental Protection Agency (EPA)

APPENDIX A

MACS Lab, Inc.
1505 Wyatt Dr
Santa Clara, CA 95054-1586

(408) 727-9727

Bulk Asbestos Analysis

Report

PLM

SCS Engineers
3711 Long Beach Blvd.
Ninth Floor
Long Beach CA 90807-3315

Person to contact:
Contact phone: 562-462-9544
FAX phone: 562-427-0805
Sampled by: Steinberger
Sampled on: August 5, 2005
Analyzed on: August 9, 2005 at: 16:43
Corresponding invoice number: 145397

Analyst: HCB (signature)

Laboratory manager: (signature)

Job Description: City of Milpitas - 116 N. Main St. - Project # 01205098.06

Lab Sample Number	Client Sample Number and Description	Asbestos detected?	Fibers present	Remarks
L145397-1	23467 Drywall, 116 N. Main St. (Shop), Interior	**N.D**	2% Cellulose	Off-white joint compound. Balance of sample is unspecified non-fibrous material.
L145397-2	23468 Drywall, 116 N. Main St. (Shop), Interior	**N.D**	2% Cellulose	Off-white joint compound. Balance of sample is unspecified non-fibrous material.
L145397-3	23469 Drywall, 116 N. Main St. (Shop), Interior	**N.D**	2% Cellulose	Off-white joint compound. Balance of sample is unspecified non-fibrous material.
L145397-4	23470 Window putty, 116 N. Main St. (Shop), Interior	**N.D**	1% Cellulose	Off-white putty. Balance of sample is unspecified non-fibrous material.
L145397-5	23471 Roofing, 116 N. Main St. (Shop), Interior	**N.D**	13% Fiberglass 3% Cellulose	Black multilayer roofing aggregate. Balance of sample is silicate and organic binders.

End of report.

* Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite are asbestos fibers. N.D.=None Detected PC =Point Counted

NVLAP® NVLAP Lab Code 101948-0

CHAIN OF CUSTODY RECORD

L145397

SCS ENGINEERS
Environmental Consultants
3711 Long Beach Blvd.
Ninth Floor
Long Beach, CA
90807-3315
(562) 426-9544
FAX (562) 427-0805

PERSONNEL INFORMATION

Name (Print) Udo STEINBERGER
Sampler (Signature) Udo Steinberger
Project Geologist/Engineer
Field Crew Supervisor
Field Company SCS ENGINEERS
Field Company Phone

PROJECT INFORMATION

Job Number 01205098.06
Job Name City of Milpitas
Job Address 116 N. MAIN St.
P.O. Number

Relinquished by (Signature)	Received by (Signature)	Date	Time
Udo Steinberger		08/05/05	12:00
		08/05/05	2:33

Turn Around Time Required: ☐ Normal ☐ 48-hour ☐ 24-hour ☐ Immediate Attention

Laboratory should complete "sample condition upon receipt" section, sign, and return copy to shipper

	Sample Number	Sample Type	Sample Location	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
1	23467	DRY WALL	SEE BULK	08/05/05	ASB (PLM)	
2	23468	DRY WALL	SAMPLE SUMMARY	↓	↓	
3	23469	DRY WALL	LOGS			
4	23470	Window Putty	↓			
5	23471	Roofing				
6						
7	01210	PAINT			LEAD	
8	01209	↓			↓	
9	01211					
10	01212					
11	01213					
12	01217					
13						
14						
15						
16						
17						
18						
19						
20						

Remarks:

Laboratory Signature 97

Asbestos

BULK SAMPLE SUMMARY LOG

L145397 PAGE 1 OF 1

SCS ENGINEERS
Long Beach, California

	SAMPLE NUMBER	BUILDING	AREA	ROOM	MATERIAL TYPE	MATERIAL CONDITION	COLOR	SAMPLE LOCATION
1	23467	116 N Main St (SHOP)	Interior	Central Office	Dry wall	Fair	white	S. Wall (COMPOSITE)
2	23468	"	"	N-CENTRAL OFFICE	"	POOR	OFF-WHITE	S/W WALLS (COMP.)
3	23469	"	"	CENTRAL OFFICE	Dry Wall	Fair	OFF white	CEILING (COMP)
4	23470	"	"	LOFT	WINDOW PUTTY	POOR	OFF white	~~EE~~ ROOF WINDOW (7 WINDOWS) (COMP.)
5	23471	"	SHED	-	ROOFING	FAIR	GRAY	SE CORNER (ABOVE SHAKE) (COMP.)
6								
7								
8								
9								
10								
11								
12								

INSPECTOR(S) : Udo Steinberger DATE : 08/05/05 JOB No : 01205098.06 ©1990

Rcvd. [signature] [illegible] 2005 [illegible]

BUILDING INSPECTION FORM

Building : 116 N MAIN ST (SHOP)	Area :	Room :	Page 1 of 1

ITEM								NOTES
ROOM TYPE	Retail	(Mech)	Storage	Office	RestRm	WareH	Other	
General Condition	Excel	Good	Fair	(Poor)	V.Poor			
Occupied	Yes	(No)		No.				
POPULATION TYPE	Staff	Office	Public	Maint	Contr	Vendor	(Other)	N/A
* Room Activity/Use	High	Med	Low	V. Low			(N/A)	
Population Number	un 10	20	30	50	ovr 50		(N/A)	
Population Exposure (hrs per wk)	un 20	40	60	80	ovr 100		(N/A)	
WALL MATERIAL	Conc	Masnry	(Wood)	Drywal	Plastr	Metal	Other	
Wall Texture	Ruff	(Pitted)	Text	(Smooth)	Coregat	W.Paper	Other	
Floor Material	(Conc)	Vinyl	Carp	Wood	Dirt	Ceramic	Other	
Ceiling Material	Conc	Tile	Plastr	(Wood)	Steel	Drywal	Other	
Ceiling Shape	Flat	(Pitched)	.Dome	Ribbed	Waffle	Joist	Other	
Ceiling Access Doors / Size (CAD)	No.		Size:				(N/A)	
Wall Access Doors / Size (WAD)	No.		Size:				(N/A)	
SUSPECTED ACM MATERIAL TYPE	Pipe	SAM	Air-Cel	VFS	VFT	(Other)	N/A	DRYWALL
Material Thickness (inches) approx.	in.=						(N/A)	WINDOW PUTTY
* Physical Damage	High	Med	Low	V. Low	Other		(N/A)	
Number of Pipes (SB <2", LB >5"Xapprox)	SB		MB		LB		N/A	
Pipe Diameter (inches) (approx)	SB		MB		LB		N/A	
Number of: Elbows, Tee's, Valves (approx)	SB		MB		LB		N/A	
Material Footage-Lineal Footage (approx)	SB		MB		LB		N/A	
Number of Ducts / Size (approx)	No.		Size				N/A	
Material Footage-Square Footage (approx)	sq.ft.=				Not Quantified		N/A	
* FRIABILITY	V. High	High	Med	Low	None		N/A	
Exposure Potential	V. High	High	Med	Low	None		N/A	
Exposed, Potentially Friable, ACM	V. High	High	Med	Low	None		N/A	
Friable Assessment	Renov	Deterio	EarthQ	Age	Abuse	Other	N/A	
* Water Damage	High	Med	Low	V. Low	None	Other	N/A	
BARRIERS	Ceiling	Encls	Rail	Pipes	Furnatr	Other	N/A	
* Accessability	Encl	Plenum	Pipes	Tight	Med	Open	N/A	
Distance to Repairs (ft. above head level)	2 ft	4 ft	6 ft	10ft	15ft	ovr 15	N/A	
* AIR MOVEMENT	High	Med	Low	V. Low			N/A	
Air Erosion Evident	Yes	(No)						
Distance from Intake Vent (feet)	ft.=						N/A	
Distance to Outflow Vent (feet)	ft.=						N/A	
Vents near Friable Material	Yes	(No)						
Outside Openings	Yes	(No)	Window	Door	Vent		Other	
SAMPLES TAKEN	(Yes)	No	(Bulk)	Air		Amt- 5		
Sample Numbers	23467	23468	23469	23470	23471			
EQUIPMENT (What Type)	Yes	(No)	Type:					
Electrical Equipment	Motor	Fans	Transf	Pump	Comp	Other	(N/A)	
Chemicals	Acids	Fuels	Solvnts	Cleanrs	Oil/Grse	Other	(N/A)	

Notes: ~ 20's ONE-STORY WOOD-FRAME W/ WOOD SIDING

1 - CONCRETE SLAB (SOILS)

2 - WOOD INTERIOR W/ DRYWALL PARTITIONS / CEILING

3 - WINDOW PUTTY IN SKY LIGHT WINDOWS

4 - ROOF: TAR/GRAVEL

Contacts : GEORGE BERMUDEZ CITY OF HILDITAS

Project No.: 01205098.06

* Factors used to determine EXPOSURE INDEX (see Exposure Algorithm)

SCS ENGINEERS ©1990

Inspector : Udo Steinberger Date : 08/05/05

APPENDIX B

MACS Lab, Inc.
1505 Wyatt Dr
Santa Clara, CA 95054-1586

(408) 727-9727

Analysis Report
Lead in Paint
USEPA 7000/7420

SCS Engineers
3711 Long Beach Blvd.
Ninth Floor
Long Beach CA 90807-3315

Person to contact:
Contact phone: 562-482-9544
FAX phone: 562-427-0805
Samples received on: August 9, 2005
Samples analyzed on: August 10, 2005 at: 12:34
Report printed on: August 10, 2005 at: 12:34
Corresponding invoice number: 145399

Analyst: Duy Nguyen DN (signature)

Laboratory manager: A. D. Sime (signature)

Job Description: City of Milpitas - 116 N. Main St. Project # 01205098.06

Lab Sample Number	Client Sample Number and Description	Calib #	Rcvd OK	Ac-cptd	Report'g Limit ppm	%	Lead, ppm	mg/cm^2
P145399-1	01210 Paint, 116 N. Maint St. (Shop), Exterior	10098	☒	☒	1,800	7.05	70,500	N/A
P145399-2	01209 Paint, 116 N. Main St. (Shop), Exterior	10098	☒	☒	1,000	2.01	20,100	N/A
P145399-3	01211 Paint, 116 N. Main St. (Shop), Exterior	10098	☒	☒	1,900	5.55	55,500	N/A
P145399-4	01212 Paint, 116 N. Main St. (Shop), Exterior	10098	☒	☒	580	1.35	13,500	N/A
P145399-5	01213 Paint, 116 N. Main St. (Shop), Interior	10098	☒	☒	100	0.373	3,730	N/A
P145399-6	01217 Paint, 116 N. Main St. (Shop), Interior	10098	☒	☒	100	< 0.010	< 101	N/A

AIHA ACCREDITED LABORATORY

 MACS Lab is accredited by the American Industrial Hygiene Association (AIHA) for the analysis of lead in paint and soil (laboratory ID #11172). Some paint samples submitted contain substrate material that can't be removed from the paint layer. This may cause erroneous results. Proper field sampling techniques must be used. Analysis is performed on a flame Atomic Absorption Spectrometer. PPM= parts per million & 10,000 ppm = 1% Note: 1 mg/kg = 1 ppm NOTICE: FOR XRF Confirmation: When the actual sampled area is provided to the laboratory, the results can be calculated in mg/cm2 exactly like an XRF instrument result. Otherwise NO XRF comparison can ever be made because the lab analyzes only a portion of a normal sample and the area of a scrape can't be known after the fact. Without the area N/A is reported.

MACS Lab, Inc.
1505 Wyatt Dr
Santa Clara, CA 95054-1586

Quality Control Report

Calibration # AA-10098

Element Lead Matrix: Paint Method Detection Limit 0.25 µg/ml

Date of Analysis August 10, 2005 Analyst DN

		Measured Value	Target Value	Acceptance Criterion	
Standard value	0.0 µg/ml	0.00000 units	N/A		
Standard value	0.8 µg/ml	0.01590 units	N/A		
Standard value	2.0 µg/ml	0.04000 units	N/A		
Standard value	5.0 µg/ml	0.09730 units	N/A		
Standard value	10.0 µg/ml	0.19250 units	N/A		
Slope		52.0346 µg/ml/unit	N/A		
Intercept		-0.037870 µg/ml	N/A		
Correlation coefficient		0.999988	1	≥ 0.99800	Acceptable
0.25 µg/ml Reference		0.217 µg/ml	0.25	≥0.08	Acceptable
Glassware rinse water		< 0.250 µg/ml	0		
1st Matrix Blank		< 0.250 µg/ml	0	≤ 0.25	Acceptable
Method Blank Beginning		-3.184 µg	0	≤ 12.5	Acceptable
CCV Beginning		5.072 µg/ml	5.0000	± 10.0%	Acceptable
ICV Beginning		1.419 µg/ml	1.4000	± 10.0%	Acceptable
LCS Before sample 1		10.135 µg/ml	10.1898	± 10.0%	Acceptable
CCV Before sample 11		N/A µg/ml	5.0000	± 10.0%	
CCB Before sample 11		N/A µg/ml	0	≤ 0.25	
Method Blank Before sample 11		N/A µg	0	≤ 12.5	
CCV Before sample 21		N/A µg/ml	5.0000	± 10.0%	
CCB Before sample 21		N/A µg/ml	0	≤ 0.25	
2nd Matrix Blank		N/A µg/ml	0	≤ 0.25	
Method Blank Before sample 21		N/A µg	0	≤ 12.5	
CCV Before sample 31		N/A µg/ml	5.0000	± 10.0%	
CCB Before sample 31		N/A µg/ml	0	≤ 0.25	
Method Blank Before sample 31		N/A µg	0	≤ 12.5	
CCV After		5.077 µg/ml	5.0000	± 10.0%	Acceptable
CCB After		< 0.250 µg/ml	0	≤ 0.25	Acceptable
Method Blank After		-3.184 µg	0	≤ 12.5	Acceptable
LCS After		10.182 µg/ml	10.1898	± 10.0%	Acceptable
RLVS		0.228 µg/ml	0.2500	± 25.0%	Acceptable
Spike of sample	145399 - 6	485.6 µg	500.0	± 25.0%	Acceptable
Spike of sample	0 - 0	N/A µg	0.0	± 25.0%	
Spiked Duplicate	145399 - 6	493.0 µg	500.0	± 25.0%	Acceptable
Spiked Duplicate	0 - 0	N/A µg	0.0	± 25.0%	
Duplicate of sample	145399 6	≤ 102 ppm	≤ 101	± 25.0%	Acceptable
Duplicate of sample	0 - 0	N/A ppm		± 25.0%	

Note:
MDL= Minimum Detection Limit of the method (absolute)
ICV= Initial Calibration Verification
CCV= Continuing Calibration Verification
CCB= Continuing Calibration Blank
N/A = Not Applicable
LCS= Laboratory Control Sample - NIST SRM-1579
RLVS=Reporting Limit Verification Sample

Duplicate analyses are measurements of the variable of interest (in this case lead) performed identically on two subsamples of the same sample. The results from duplicate analyses are used to evaluate analytical or measurement precision but not the precision of sampling. Spiked samples are prepared by adding a known mass of the target analyte (in this case lead) to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. Spiked samples are used to determine the effect of the matrix on a method's recovery efficiency. The Method Blank is used to detect contamination from the laboratory. Accuracy is the degree of agreement between an observed value and an accepted reference value such as the LCS NIST SRM-1579 sample. Precision is the degree to which a set of observations or measurements of the same property conform to themselves. NEVER depend upon the laboratory to "fix-up" a poorly taken sample.

MACS Lab, Inc.
1505 Wyatt Dr
Santa Clara, CA 95054-1586

(408) 727-9727

AA Analysis Data Report

NOTICE:
Instrument reading is in absorbance units
For solids (paint and soil):
Weight is in grams
Paint area (if present) is in sq cm
For air:
LPM= Liters per minute supplied by client
Minutes = duration of sample
m^3 (on report) means cubic meter
For wipe:
Area = Wipe area supplied by client in sq ft
ft^2. (on report) means square foot

Client:
SCS Engineers

Submission ID Number: **145399**

Lead laboratory manager or designee: _____ (signature)

Samples received on: August 9, 2005

Samples analyzed on: August 10, 2005 at: 12:34

I verify that I have checked the records and the data entered here is accurate and matches the written records.

Sample #	Weight, LPM, or area	Solution vol ml	Instr. reading	Paint area or minutes
1	0.1385	1000	0.18840	0
2	0.1215	500	0.09460	0
3	0.1287	1000	0.13790	0
4	0.2164	500	0.11270	0
5	0.1225	50	0.17650	0
6	0.1238	50	0.00420	0

End of report

This report shows the data associated with the individual samples. This includes the MACS Lab, Inc. sample number, the sample weight digested, LPM, area wiped, dilution (solution volume), instrument reading in absorbance, paint area, time in minutes. By using the data on this page, and the slope and intercept found on the calibration curve page of this report one can calculate the concentration of analyte in the original sample. Be sure to use the calibration curve data for the sample tested (see sample results page for Calib. Number). In the case of paint and soil matrices multiply the slope times the absorbance and add the intercept. Multiply this number by the dilution and then divide by the weight. The result will be expressed in PPM. In the case of dust samples multiply the slope times the absorbance and add the intercept. Multiply this number times the dilution and adjust for the area wiped if it is not 1 sq ft. For air samples multiply the slope times the absorbance and add the intercept. Multiply this number by the dilution. This will be the number of µg of lead on the filter. Divide this number by the liters of air used and compute the concentration in cubic meters. A cubic meter contains 1000 liters. Note: in all cases if the concentration calculated by multiplying the slope times the absorbance and adding the intercept is below the MDL (method detection limit) value for that matrix substitute the MDL for the value calculated. This will be the Reporting Limit in PPM. (note: the MDL is shown only to 2 significant figures on this report which will result is slight differences between our and your calculations for this number).

The slope and intercept can be calculated using the absorbance and concentration (see the Quality Control Report) of the standards used in the analysis. This can be done by using linear regression analysis.

µg means micrograms or millionth of a gram.

CHAIN OF CUSTODY RECORD

L145397

SCS ENGINEERS
Environmental Consultants
3711 Long Beach Blvd.
Ninth Floor
Long Beach, CA
90807-3315
(562) 426-9544
FAX (562) 427-0805

PERSONNEL INFORMATION

Name (Print) Udo Steinberger
Sampler (Signature) Udo Steinberger
Project Geologist/Engineer
Field Crew Supervisor
Field Company SCS ENGINEERS
Field Company Phone

PROJECT INFORMATION

Job Number 01205098.06
Job Name City of Milpitas
Job Address 116 N. Main St.
P.O. Number

Relinquished by (Signature)	Received by (Signature)	Date	Time
Udo Steinberger		08/05/05	12:00
		08/05/05	2:33

Turn Around Time Required: ☐ Normal ☐ 48-hour ☐ 24-hour ☐ Immediate Attention

Laboratory should complete "sample condition upon receipt" section, sign, and return copy to shipper

	Sample Number	Sample Type	Sample Location	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
1	23467	DRY WALL	SEE BULK	08/05/05	ASB (PLM)	
2	23468	DRY WALL	SAMPLE SUMMARY			
3	23469	DRY WALL	LOGS			
4	23470	Window Putty				
5	23471	Roofing				
6						
7	01210	PAINT			LEAD	
8	01209					
9	01211					
10	01212					
11	01213					
12	01217					
13						
14						
15						
16						
17						
18						
19						
20						

Remarks:

Signature

(LBP)

BULK SAMPLE SUMMARY LOG

PAGE 1 OF 1

SCS ENGINEERS
Long Beach, California

	SAMPLE NUMBER	BUILDING	AREA	ROOM	MATERIAL TYPE	MATERIAL CONDITION	COLOR	SAMPLE LOCATION
1	01210	1116 N. Main st (SHOP)	EXTERIOR	—	PAINT	Poor	WHITE	S. Exterior wall (composite)
2	01209	1116 "	"	"	"	"	Brown	S. Exterior Window Sill
3	01211	"	"	—	PAINT	Poor	Yellow/ white/ Grey	S. STORAGE AREA (CENTER) TOP Cracked Asphalt Comp. (150 Sq ft)
4	01212	"	"	—	Paint	Poor	white	S side sliding door comp.
5	01213	"	Interior		Paint	Poor	white	E. Back Door comp 300 sq ft
6	01217	"	"	CENTRAL OFFICE	Paint	Poor	BEIGE	CEILING comp.
7								
8								
9								
10								
11								
12								

INSPECTOR(S) : _____ DATE : _____ JOB No : _____ 01900

ASBESTOS AND LEAD-BASED PAINT INVESTIGATION SINGLE-FAMILY RESIDENCE 86 NORTH MAIN STREET MILPITAS, CALIFORNIA

Prepared For:

City of Milpitas
455 East Calaveras Boulevard
Milpitas, California 95035-5411
(408) 586-3409

Prepared By:

SCS Engineers
3900 Kilroy Airport Way, Suite 100
Long Beach, California 90806
(562) 426-9544

September 2005
File No. 01205098.07

CONTENTS

TABLES

APPENDICES

ASBESTOS AND LEAD-BASED PAINT INVESTIGATION
RESIDENTIAL STRUCTURE
86 NORTH MAIN STREET
MILPITAS, CALIFORNIA

1.0 EXECUTIVE SUMMARY

SCS Engineers (SCS) was retained by the City of Milpitas to conduct an asbestos and lead-based paint investigation of a single-family residence and associated structures (e.g., attached carport and metal garage) located at 86 North Main Street, Milpitas, California. It is our understanding that these structures will be demolished as part of a redevelopment effort (City of Milpitas Public Library Project). Mr. Udo Steinberger of SCS conducted a walk-through inspection of the residence on August 5, 2005.

The Property is located on the east side of North Main Street and bounded by commercial or multi-residential properties on the north, south, and east sides.

Asbestos Survey

Testing results indicated that building materials with asbestos concentrations above one percent identified within the structure were:

- Vinyl floor sheeting
- Transite pipes (assumed to be asbestos-containing)

A detailed description of the above-listed materials, as well as building materials that did not contain asbestos, is provided in Table 1.

Lead-Based Paint Survey

Paint systems observed on the exterior as well as within the interior of the residence appeared to be in good condition with no loose or flaky paint observed. Therefore, no paint samples were collected from this structure.

Cal OSHA asbestos consultant certification (C.A.C.) and AHERA accreditation numbers for the inspector who performed the site investigation are:

Udo G. Steinberger: Certification No: 98-2491
AHERA Accreditation No: RBI-16098

2.0 INTRODUCTION

SCS was retained by the City of Milpitas to conduct an asbestos and lead-base paint investigation of a single-family residence and associated structures (e.g., attached carport and metal garage) located at 86 North Main Street in Milpitas, California. It is our understanding that the structures will be demolished for the proposed Milpitas Public Library Project.

The objective of this investigation was to identify asbestos-containing building materials (ACBMs) within the residence and characterize flaking paint systems for the presence of lead. The investigation consisted of an inspection of the structure as well as sampling and analysis of suspect building materials for asbestos content. This report presents observations and results of the investigation. This investigation is based on the assumption that the structure will be demolished. SCS should be contacted for additional recommendations in the event that this building is renovated and/or remains in place.

This report has been specifically prepared for use and reliance by the City of Milpitas with application to a survey for ACBMs of residential structures located at **86 North Main Street**, as part of the proposed Milpitas Public Library Project. This report has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, either expressed or implied, is made as to the opinions presented herein. No other party, known or unknown to SCS, is intended as a beneficiary of this work product, its content, or information embedded therein. Third parties use this report at their own risk. SCS assumes no responsibilities for the accuracy of information obtained, compiled, or provided by others.

3.0 SITE INFORMATION AND BUILDING INSPECTION

This one-story, single-family dwelling was of typical wood-frame construction and built on a raised concrete foundation. A metal garage and attached carport were observed southeast of the house. The residence was abandoned and reportedly constructed in the 1950's. It appeared to be in generally good condition at the time of inspection.

Exterior walls were covered with wood siding. Interior walls as well as some ceilings were covered with plaster materials. Hard wood floors were mostly carpeted. Vinyl floor sheeting was noted with kitchen and adjacent laundry room areas.

The residence's roof was pitched and covered with wood shake. Two transite flue pipes were observed penetrating the roof in the vicinity of the stove and water heater. A third transite flue pipe was attached to the south wall of the house near the southwest corner. These pipes are assumed to be asbestos-containing, since transite consists of a concrete and asbestos mixture with a typical asbestos content of 20-40 percent

4.0 SAMPLING OF SUSPECT BUILDING MATERIALS

A walk-through of the residence was conducted on August5, 2005 by Mr. Udo Steinberger of SCS, a Cal-OSHA-certified California asbestos consultant (CAC 98-2491). Mr. Steinberger was assisted by Mr. Ted Sison of SCS. Access to the residence was arranged by Mr. Jorge Bermudez, of the City of Milpitas. A total of 7 bulk samples were collected from the structure for laboratory asbestos analysis. The following suspect building materials were sampled:

- Attic insulation
- Ceiling/wall plaster
- Vinyl flooring materials

Each sample of plaster and attic insulation was prepared by collecting materials from several locations and compositing them into a single sample. Therefore, the number of samples collected was judged sufficient to provide adequate characterization of these materials. Transite flue pipes were not sampled but assumed to be asbestos-containing. Transite materials typically contain 20-40 percent asbestos and 60-80 percent cement. Bulk Sample Summary Logs attached in Appendix A provide a description and identify locations of all samples collected from the residence.

During the investigation, no paint systems were observed to be in deteriorated condition (i.e., flaking). Therefore, no paint samples were collected

5.0 ANALYTICAL RESULTS

Asbestos Survey

Bulk samples collected from the structures during this inspection were delivered to MACS Lab Inc., a NVLAP (National Voluntary Laboratory Accreditation Program) accredited laboratory for analysis of asbestos content. Bulk samples were analyzed for asbestos using Polarized Light Microscopy (PLM) and Dispersion Staining in accordance with the United States Environmental Protection Agency (EPA) Interim Method for the Determination of Asbestos in Bulk Samples (40 CFR 763, Subpart F, Appendix A).

Analytical results indicate that several samples of suspect building materials collected contained asbestos at concentrations greater than one percent. ACBMs identified within the residence consisted of:

86 North Main Street:

- Vinyl floor sheeting (2 layers)
- Transite pipes

Analytical results are summarized in Table 1 with the laboratory report provided in Appendix A.

Lead-Based Paint Survey

Paint systems observed at this structure were observed in good condition with no loose and/or flaky paint noted.

6.0 LOCATION AND ESTIMATED QUANTITIES OF ACBMs

Approximate locations and quantities of ACBMs identified within the residence are summarized below:

- Vinyl floor sheeting: kitchen and laundry room - 250 square feet (sq ft) (2 layers)
- Transite pipes: south exterior wall, near center - 10 linear feet (ln ft) (4-inch diameter)
  laundry room closet - 8 ln ft (4-inch diameter)
  hallway water heater closet - 8 ln ft (4-inch diameter)

7.0 CONCLUSIONS

Asbestos Survey

The following conclusions are based both on observations of potential ACBMs during the building inspections and on analytical results. By federal definition (Environmental Protection Agency/NESHAPS - 40 CFR 61 Part M), any substance that contains more than one percent asbestos is classified as an asbestos-containing material (ACM). Within the State of California, California Occupational Safety and Health Administration (Cal-OSHA) defines an asbestos-containing construction material as being any material used in building construction containing greater than one percent (1.0%) asbestos. Materials other than construction materials are regulated at greater than one tenth of one percent (0.1%) asbestos.

Of the ACBMs identified, vinyl floor sheeting within kitchen and laundry areas is considered to be a friable ACBM. A friable ACBM is defined as a material that can be crumbled, pulverized, or reduced to a powder by hand pressure, potentially releasing airborne asbestos fibers. These materials pose a potential for asbestos fiber release if disturbed. In the case of vinyl floor sheeting, the paper backing is considered friable. While not exposed after placement, this paper backing typically becomes significantly disturbed (e.g., becomes friable) during removal. Vinyl floor sheeting identified within the single-family dwelling was observed to be in good condition and does not pose a significant potential for airborne fiber release if undisturbed.

Asbestos-containing transite pipes are considered nonfriable ACBMs and typically not anticipated to readily release asbestos fibers if left undisturbed. However, nonfriable forms of ACBMs may release asbestos fibers when disturbed, broken, or subjected to mechanical abrasion (e.g. sanding or drilling). In addition, non-friable ACBMs may become friable if damaged. ACBMs identified within the residence appeared to be in good condition and are not anticipated to pose a potential for airborne fiber release if not disturbed.

This report and analysis represent a limited characterization of asbestos materials within the subject residence. Not all of the suspect materials were sampled within each room or common area. the two Only a representative number of samples were collected from suspect materials within each homogeneous area regardless of the number of areas it was observed in. In addition, no attempt was made to provide a valid statistical approach to completely characterize all of the asbestos within all of the structure. Note that additional ACBMs may be present within wall or attic spaces, plenums, mechanical systems, etc. that were not accessible during this inspection. Prior to and/or during renovation activities, any suspect building material not characterized during this inspection should be sampled and analyzed for asbestos content.

7.0 CONCLUSIONS

Asbestos Survey

The following conclusions are based both on observations of potential ACBMs during the building inspections and on analytical results. By federal definition (Environmental Protection Agency/NESHAPS - 40 CFR 61 Part M), any substance that contains more than one percent asbestos is classified as an asbestos-containing material (ACM). Within the State of California, California Occupational Safety and Health Administration (Cal-OSHA) defines an asbestos-containing construction material as being any material used in building construction containing greater than one percent (1.0%) asbestos. Materials other than construction materials are regulated at greater than one tenth of one percent (0.1%) asbestos.

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Lead-Based Paint Survey

Cal-OSHA guidelines (Title 8, California Code of Regulations, Section 1532.1) are applicable to occupational exposures to potential lead-containing materials during renovation/demolition activities. Cal-OSHA guidelines indicate that coatings or materials containing lead at concentrations equal to or exceeding 0.06 percent by weight or 600 mg/kg (milligrams per kilogram, equivalent to parts per million [ppm]) constitute a health hazard to employees engaged in lead-related construction work. Poisonings may occur if workers or visitors ingest lead-based paint and/or inhale dust from lead-based paint.

Although not characterized (due to the good condition of the paint systems), contractors involved in renovation/demolition activities should assume that lead is present within paint systems and be aware of potential health hazards associated with lead-based paint. Care should be taken to protect workers (i.e., respiratory protection) when disturbing paint systems during renovation/demolition activities.

8.0 RECOMMENDATIONS

The following recommendations are provided for ACBMs identified within the subject residence. Recommendations are based on observations, laboratory analysis, and on the assumption that the structure may be demolished in the near future:

Asbestos Survey

- Friable ACBMs identified within the structures consist of vinyl floor sheeting. This material was observed to be in good condition. If abated, friable ACBMs must be removed in accordance with Class I asbestos abatement procedures as defined in Fed-OSHA 29 CFR 1926.1101 (i.e. full containment and appropriate air filtration techniques should be employed during removal of friable ACBMs to prevent the release of asbestos fibers).

- Asbestos-containing non-friable ACBMs (e.g., transite pipes) identified within the residence must also be removed by a properly licensed abatement contractor prior to being disturbed as a result of renovation or demolition activities. If abated, non-friable ACBMs must be removed in accordance with Category II asbestos abatement procedures as defined in Fed-OSHA 29 CFR 1926.1101.

- All ACBM removal operations must be performed by properly licensed abatement contractors within the State of California. It is also recommended that the contractor demonstrate sufficient qualifications to perform the level of work required as well as providing liability insurance coverage for the asbestos removal project.

Until all of the ACBMs are removed from the structure we also recommend the following:

- Procedures should be established whereby all utility personnel and contractors who may be conducting work within the structures are informed, prior to initiating work, as to the presence of ACBMs and ACM debris, their location, type, and condition.

- The EPA recommends that when ACBMs have been identified within a structure or a facility and are not removed, an operation and maintenance (O&M) program for ACBMs should be implemented. O&M plans typically include such program elements as the designation of a responsible person, notification and labeling, periodic re-inspection, employee training and protection, emergency response procedures, documentation, etc.

Lead-Based Paint Survey

Contractors involved in demolition projects must adhere to lead-in-construction work practices regardless of the lead concentrations within paint systems (i.e., worker respiratory protection). In addition, guidance issued by the EPA in July 2000 allows contractors to dispose of demolition debris containing lead-based paint as household waste. Therefore, there are no restrictions that apply to the disposal of debris resulting from the demolition of this structure. However, care should be taken to prevent dispersion of lead-based paint during building demolition (i.e., minimize fugitive dust emissions).

TABLES

TABLE 1. ASBESTOS ANALYTICAL RESULTS
(86 North Main Street, Milpitas)

Sample Number	Sample Location	Sample Type Description	Friability	Material Condition	Asbestos Content*	Asbestos Type
23460	Building Exterior: South wall	Plaster Materials - White (composite)			ND	
23461	Building Exterior: East wall	Plaster Materials - White (composite)			ND	
23462	Building Interior: Kitchen - east side, at doorway	Vinyl Floor Sheeting - Brown/yellow	Friable	Good	ND	CHRYSOTILE
23463	Building Interior: Northwest bedroom - north wall	Plaster Materials - White (composite)			ND	
23464	Building Interior: East water heater closet - north wall	Plaster Materials - White (composite)			ND	
23465	Building Interior: Attic - at access hatch	Insulation - Tan/brown (composite)			ND	
23466	Building Interior: Kitchen - north wall (breakfast nook)	Plaster Materials - Yellow/gray (composite)			ND	

ND = None detected
* Asbestos content determined by Polarized Light Microscopy (PLM) with dispersion staining as recommended by the Environmental Protection Agency (EPA)

APPENDIX A

MACS Lab, Inc.
1505 Wyatt Dr
Santa Clara, CA 95054-1586

(408) 727-9727

Bulk Asbestos Analysis

Report

PLM

SCS Engineers
3711 Long Beach Blvd.
Ninth Floor
Long Beach CA 90807-3315

Person to contact:
Contact phone: 562-462-9544
FAX phone: 562-427-0805
Sampled by: Steinberger
Sampled on: 00/00/00
Analyzed on: August 9, 2005 at: 17:04
Corresponding invoice number: 145387

Job Number: 01205098.0

Analyst: HCB (signature)

Laboratory manager: (signature)

Job Description: Milpitas Senior Center - 86 N. Main St., Milpitas Project # 01205098.07

Lab Sample Number	Client Sample Number and Description	Asbestos detected?	Fibers present	Remarks
L145387-1	23460 Plaster, 86 N. Main St., Exterior	**N.D**	No Fibers	Gray cement aggregate. Balance of sample is silicate and cementitious.
L145387-2	23461 Plaster, 86 N. Main St., Exterior	**N.D**	< 1% Cellulose	Gray cement aggregate. Balance of sample is silicate and cementitious.
L145387-3	23462 VFS, 86 N. Main St., Interior Kitchen	**Yes**	6% Chrysotile* 18% Cellulose 4% Synthetic	Off-white multilayer linoleum. Balance of sample is polymer, organic binders and unspecified non-fibrous material.
L145387-4	23463 Plaster, 86 N. Main St., Interior	**N.D**	3% Cellulose	Off-white plaster. Balance of sample is unspecified non-fibrous material.
L145387-5	23464 Plaster, 86 N. Main St., Interior	**N.D**	1% Cellulose	Off-white plaster aggregate. Balance of sample is silicate and unspecified non-fibrous material.

* Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite are asbestos fibers. N.D.=None Detected PC =Point Counted

NVLAP Lab Code 101948-0

MACS Lab, Inc.
1505 Wyatt Dr
Santa Clara, CA 95054-1586

(408) 727-9727

Bulk Asbestos Analysis

Report

Lab Sample Number	Client Sample Number and Description	Asbestos detected?	Fibers present	Remarks
L145387-6	23465 Insulation, 86 N. Main St., Interior Attic	**N.D**	89% Cellulose	Off-white fibrous insulation. Balance of sample is silicate and unspecified non-fibrous material.
L145387-7	23466 Plaster, 86 N. Main St., Interior	**N.D**	1% Cellulose	Off-white plaster aggregate. Balance of sample is silicate and unspecified non-fibrous material.

End of report.

* Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite are asbestos fibers. N.D.=None Detected PC =Point Counted

NVLAP®
NVLAP Lab Code 101948-0

CHAIN OF CUSTODY RECORD L145387 SCSEN

SCS ENGINEERS
Environmental Consultants
3711 Long Beach Blvd.
Ninth Floor
Long Beach, CA
90807-3315
(562) 426-9544
FAX (562) 427-0805

PERSONNEL INFORMATION

Name (Print) Udo Steinbergen
Sampler (Signature) Udo Steinbergen
Project Geologist/Engineer
Field Crew Supervisor
Field Company SCS ENGINEERS
Field Company Phone

PROJECT INFORMATION

Job Number 01205098.07
Job Name MILPITAS SENIOR CENTER
Job Address 86 N. MAIN ST, MILPITAS
P.O. Number

Relinquished by (Signature)	Received by (Signature)	Date	Time
Udo Steinbergen		08/05/05	12:00
		08/05/05	2132

Turn Around Time Required: ☐ Normal ☐ 48-hour ☐ 24-hour ☐ Immediate Attention

Laboratory should complete "sample condition upon receipt" section, sign, and return copy to shipper

	Sample Number	Sample Type	Sample Location	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
1	23460	PLASTER	SEE BULK	08/05/05	ASB (PLM)	
2	23461	"	SAMPLE			
3	23462	VFS	SUMMARY LOG			
4	23463	PLASTER				
5	23464	"				
6	23465	INSULATION				
7	23466	PLASTER				
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Remarks:

(Asbestos)

BULK SAMPLE SUMMARY LOG

L145387 PAGE 1 OF 1

SCS ENGINEERS
Long Beach, California

	SAMPLE NUMBER	BUILDING	AREA	ROOM	MATERIAL TYPE	MATERIAL CONDITION	COLOR	SAMPLE LOCATION
1	23460	86 N MAIN ST (SFS)	EXTERIOR	—	PLASTER	GOOD	WHITE	S EXTERIOR WALL (COMPOSITE)
2	23461	86 N main St	Exterior	—	PLASTER	GOOD	WHITE	E EXTERIOR WALL (COMPOSITE)
3	23462	"	INTERIOR Kitchen	Kitchen	VFS	GOOD	BROWN/ YELLOW	E SIDE @ DOORWAY (2 LAYERS) 200 Sq Ft including laundry room
4	23463	"	INTERIOR	NW BEDROOM	PLASTER	GOOD	WHITE	N. WALL PLASTER COMPOSITE
5	23464	"	"	E. water Heater closet	PLASTER	FAIR	WHITE	N. WALL PLASTER COMPOSITE
6	23465	"	Interior ATTIC	Room ATTIC	Insulation	FAIR	TAN/ Brown	E. SIDE ATTIC Insulation (TAN/BRN) COMP.
7	23466	"	Interior	Kitchen	PLASTER	Good	Yellow/ Grey	N. Wall (Breakfast Nook)
8			~~Interior~~					
9								
10								
11								
12								

INSPECTOR(S) : Leo STEINBERGER DATE : 08/05/05

JOB No : 01205098.07 ©1990

08/05/05 2:04

BUILDING INSPECTION FORM

Building : 56 N. MAIN ST (SFD)	Area :	Room :	Page 1 of 1

ITEM								NOTES
ROOM TYPE	Retail	Mech	Storage	Office	RestRm	WareH	Other	SFD
General Condition	Excel	(Good)	Fair	Poor	V.Poor			
Occupied	Yes	(No)		No.				
POPULATION TYPE	Staff	Office	Public	Maint	Contr	Vendor	(Other)	N/A
* Room Activity/Use	High	Med	Low	V. Low			(N/A)	
Population Number	un 10	20	30	50	ovr 50		(N/A)	
Population Exposure (hrs per wk)	un 20	40	60	80	ovr 100		(N/A)	
WALL MATERIAL	Conc	Masnry	(Wood)	Drywal	(Plastr	Metal	Other	
Wall Texture	(Ruff)	Pitted	Text	(Smooth)	Coregat	W.Paper	Other	
Floor Material	Conc	(Vinyl)	(Carp)	(Wood)	Dirt	Ceramic	Other	
Ceiling Material	Conc	Tile	(Plastr)	Wood	Steel	Drywal	Other	
Ceiling Shape	(Flat)	Pitched	.Dome	Ribbed	Waffle	Joist	Other	
Ceiling Access Doors / Size (CAD)	No.		Size:				N/A	
Wall Access Doors / Size (WAD)	No.		Size:				N/A	
SUSPECTED ACM MATERIAL TYPE	Pipe	SAM	Air-Cel	(VFS)	VFT	Other	N/A	TRANSITE
Material Thickness (inches) approx.	in.=						N/A	
* Physical Damage	High	Med	(Low)	V. Low	Other		N/A	
Number of Pipes (SB <2", LB >5" Xapprox)	SB		MB		LB		(N/A)	
Pipe Diameter (inches) (approx)	SB		MB		LB		(N/A)	
Number of: Elbows, Tee's, Valves (approx)	SB		MB		LB		(N/A)	
Material Footage-Lineal Footage (approx)	SB		MB		LB		(N/A)	
Number of Ducts / Size (approx)	No.		Size				(N/A)	
Material Footage-Square Footage (approx)	sq.ft.= SEE BULK SAMPLE LOG				Not Quantified		N/A	
* FRIABILITY	V. High	High	Med	Low	(None)		(N/A)	
Exposure Potential	V. High	High	Med	Low	(None)		(N/A)	
Exposed..Potentially Friable, ACM	V. High	High	Med	Low	None		(N/A)	
Friable Assessment	Renov	Deterio	EarthQ	Age	Abuse	Other	(N/A)	
* Water Damage	High	Med	Low	V. Low	None	Other	(N/A)	
BARRIERS	(Ceiling)	Encls	Rail	Pipes	Furnatr	Other	N/A	
* Accessability	Encl	Plenum	Pipes	Tight	(Med)	Open	N/A	
Distance to Repairs (ft. above head level)	2 ft	4 ft	6 ft	10ft	15ft	ovr 15	(N/A)	
* AIR MOVEMENT	High	Med	Low	V. Low			(N/A)	
Air Erosion Evident	Yes	(No)						
Distance from Intake Vent (feet)	ft.=						(N/A)	
Distance to Outflow Vent (feet)	ft.=						(N/A)	
Vents near Friable Material	Yes	(No)						
Outside Openings	Yes	(No)	Window	Door	Vent		Other	
SAMPLES TAKEN	(Yes)	No	(Bulk)	Air		Amt- 7		
Sample Numbers	23460	23461	23462	23463	23464	23465	23466	
EQUIPMENT (What Type)	Yes	(No)	Type:					
Electrical Equipment	Motor	Fans	Transf	Pump	Comp	Other	(N/A)	
Chemicals	Acids	Fuels	Solvnts	Cleanrs	Oil/Grse	Other	(N/A)	

Notes: ~ '20's

1 - ONE-STORY WOOD-FRAME STRUCTURE W/ PLASTER COVERED EXTERIOR

2 - PLASTER (+EXTERIOR) COVERED INTERIOR WALLS / CEILINGS FLOOR HEATER / CRAWL SPACE

3 - 3 TRANSITE FLUE PIPES (CLOSETS / WATER HEATER (~20 LNFT @ 4-IN DIA) NO INS

4 - ROOF: PITCHED W/ SHAKE ATTIC: FIBERGLASS W/ SOME MINERAL WOOL INSULATION

Contacts : GEORGE BEAMGEDEZ - CITY OF MILPITAS

* Factors used to determine EXPOSURE INDEX (see Exposure Algorithm) | Project No.: 01205098.07

Inspector : UDO STEINBERGER | Date : 08/05/05 | SCS ENGINEERS | ©1990